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1. Introduction

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1.1. Introduction

This volume provides a collection of papers from an International Symposium “Fijian Languages and Culture and GIS, and Their Application to Museum Exhibits” and its satellite workshops hosted by the National Museum Ethnology in Japan (referred to as “Minpaku”) on September 18 through 21, 2018.¹⁾ The symposium was organized as an interim dissemination of the project entitled “Linguistic History and Human Flow in Fiji Revealed through GIS Data” (abbreviated as “Fijian Language GIS Project”) funded by The Resona Foundation for Asia and Oceania (April 2017–March 2019, PI: Kikusawa). The current status of the research was presented by the project members. Discussions were also held for sharing ideas of the potentials of the application of GIS to language data, and to discuss how the project was to be further developed. Being an interdisciplinary project, the presenters of the symposium included (and thus the authors in this volume include) specialists from various fields. Fortunately, as one of the outcomes of these meetings, another further project was subsequently funded and is on-going at the time of the publication of this volume. A Joint International Research (B) “Integrating Language Change in Time and Space: Applying Geographical Information System (GIS) and Statistic Modelling to Historical Linguistics” (2019–2023, PI: Kikusawa) funded by Grants-in-Aid for Scientific Research by the Japanese Society for the Promotion of Science (JSPS) started in October 2019, and we have hosted two international symposia and workshops on the topic at The University of the South Pacific in Suva (March 2019) and at Massey University in New Zealand (January 2020). Combined with a 2019 Massey University Research Fund (MURF), we have been able to publish a draft version of “The Fijian Language GIS web Map and Database” (<https://arcg.is/1my5L5>). Our exploration is continuing.

In the rest of this chapter, the background and how the projects developed are described (1.2) and the contents of the chapters in this volume are introduced (1.3).

1.2. Background of the Project

The Fijian Language GIS Project started as a spinoff of a project “Why Are Languages

Spoken in the World All Different?'" (April 2016–March 2017, PI: Kikusawa), a crowdfunding project for scanning and digitizing Paul Geraghty's fieldnotes to conserve them. Geraghty had conducted research on the *communalects*, or regional varieties of the Fijian language for over 40 years, and had been accumulating his data but mostly in handwritten forms. The scanned data, along with his fieldnotes, included a 100 wordlist with some 200 *communalects* and 5,800 maps, where the distribution of regional forms for 5,800 expressions are hand-plotted with symbols.

Both Geraghty and Kikusawa were interested in processing some of the scanned data in the form of maps and thus another project started. Geraghty's main interest was to create a language atlas, by which is meant a set of maps where the distribution of different forms for each lexical or morphological item were displayed on a map, such as the one developed by Charpentier, François, and Peltzer 2015 (see Figure 5-1, Chapter 5). Kikusawa's interest was to develop an interactive system where a linguist could extract data for the purpose of historical comparison and reconstruction. She had conducted a similar research with Malagasy dialect data (Kikusawa and Kinugasa 2005), however, the available data were limited and although some working-hypotheses were established, it was not possible to verify the hypotheses. She knew that with Geraghty's data, they had a better chance to successfully develop such a system.

It was fortunate that John Lowry, a geographer and a GIS specialist with experience of research focusing on Fiji, was then affiliated with The University of the South Pacific and was interested in collaborating with the project. This not only enabled the launching of the project, but also helped develop it in scientifically suitable ways and explore further possibilities. Apolonia Tamata, who was then Senior Culture and Heritage Specialist at iTaukei Trust Fund Board, also joined as a collaborator. She was in charge of preparation for the opening of the Fijian Cultural Center and was interested in developing language exhibits for local visitors. Kikusawa, with her expertise as having led some language exhibition preparation, was interested in getting involved with this project, and in particular, considered that this would be a good outlet for dissemination of the research results. Thus, the project aimed at: i) creating a language atlas of Fijian languages; ii) developing an interactive tool for linguists to do their own analysis; and iii) Fijian language material for a lay audience to enhance the current status of varieties of languages in Fiji. Susumu Okamoto and Fumiya Sano, who were graduate students in linguistics and cultural anthropology respectively, participated as well and took care of the basic data type-up and work that needed to be manually taken care of. Two statistics specialists and a linguist specializing in languages outside of the Fijian language group subsequently joined to further develop the team and to ensure the outcome was versatile and applicable to other language groups.

Forming a team as interdisciplinary has been found useful not only in practical aspects, but scientifically stimulating. As Geraghty and Kikusawa's interests show, linguists are more-or-less aware of the relevance of locations to where languages are spoken. However, the efforts they could make by themselves, which were bound by the methodology and perception of Historical Linguistics, were limited. Discussion among members in an interdisciplinary team helped with furthering the understanding of what was available and possible with GIS, and beyond to look at language data from a completely different view.

Sorting out scientific problems in geographical processing helped linguists to re-think non-linguistic factors.

Linguists have always been interested in relating language data to geographical information. However, there have been some obstacles and so far, maps are only used for displaying forms and locations of the languages and nothing farther. In developing a database system such as the one being developed in this project showed the lack of expertise in the map-related database. It has been limited to manually processing of data. One of the difficulties is that, regardless of whether it is a language or a regional variety that is being dealt with, it is not easy to accurately identify the geographical boundaries as to where the language is spoken. The common method is to use a dot or a space to represent the area where a language is spoken, and the non-stated assumption is that the readers would comprehend it as a symbolic representation. Linguists are used to using maps in this manner. The commonly referred to website, “The World Atlas of Language Structures (WALS) <https://wals.info/>” is one such example. Languages are represented by a circle, and it is assumed that the circle gives an approximate location and not an accurate one. The same with Linguistic Atlas of French Polynesia by Charpentier and François (<https://www.degruyter.com/view/product/177498>). As the project advances, it became obvious to linguists as well that using GIS for language data is not only for displaying data on maps but about calculating the correlation between linguistic and non-linguistic information and far more. Also, it became clear that the major advantage of using GIS, namely, the association with the information about accurate location, is in fact one of the major factors that hinders linguistic data to be incorporated into the system. A form of a lexical item of a language is usually displayed on the map, however, it indicates the approximate and not exact location, or area, which is hard to accurately determine. This was one of many that the project members have had to deal with and still are.

Using GIS for processing languages started to show us possibilities for disseminating our research results readily to the general public, especially to speakers of the language. For example, once a GIS system is developed, it is possible to develop interactive language maps which could be browsed on the internet or a local PC. It is hoped that this idea will be materialized through our collaboration with iTaukei Trust Fund Board, which is preparing for establishing a Fijian cultural center to be open to the public in Suva. The necessity of the dissemination of research results to the community is strongly recognized among researchers these days. This project also made dissemination of language data not be limited to things targeting the speakers. For example, such effort should also help JICA and Peace Corp volunteers not only to understand something about Fiji, but also in a practical sense when they stay in a local community. It is fitting in this sense that a cultural anthropologist, Norio Niwa, who specializes in Fijian Culture has the experience of introducing a Fijian drama performance to a Japanese audience, who were not familiar with Fijian culture.

Another unexpected outcome so far is involving statistics specialists. While it is common for statistic specialists working with linguists in some parts of the world, in Japan, there has been little cross interaction between these two. Non-linguists who are interested in languages in Japan often use linguistics in an unsophisticated style, often with inappropriate data. Sometimes the interpretation of their analyses is totally non-scientific. This project,

by involving statistic and geography specialists, makes real language available for them, to proceed with their own analysis in their own field.

1.3. About the Chapters in This Volume

The chapters in this volume are presented in three parts, Part I: Studies of Languages in Fiji, Part II: GIS and Linguistics, and Part III: Museum as a Venue for Disseminating Research Results. In addition, two appendices are provided showing the 100 wordlist data and also the research proposal of the currently on-going project. As a preliminary report of the sequence of a long-term project developing, managing and eventually utilizing a Fijian language GIS database, the topics have been chosen to cover a wide range of related issues, including descriptions related to the linguistic situation in Fiji and also possible and potential research dissemination related to Fijian language and culture. These discussions should all lead to the subsequent development of not only a database system usable for historical linguistic analyses, but also user interfaces.

Part I presents some information about languages and linguistics in Fiji.

Geraghty (Chapter 2) provides an overview of the historical development of Fijian languages and the history of studying Fijian languages with some published materials on the languages. Geraghty has lived in Fiji dedicating his life to doing research on 300 communalects, and he presents his views about how Fijian languages came to be so diverse and what the current vital level is of the languages based on his own experience over decades. Incidentally, Geraghty has been actively disseminating his research results about Fijian communalects through radio and TV programs over the years, and his contribution towards local speakers' knowledge and view about their own languages is enormous.

Okamoto (Chapter 3), based on his own fieldwork in the island of Vatulele, provides an analysis of the languages spoken on the island. He points out that, in this language, the preposition *i* sometimes behaves as a part of the phonological unit of the preceding the verb, a phenomenon not previously reported in the description of other Fijian languages. He claims that this incurs a mismatch between phonology and grammar and tries to propose how this could be accounted for.

Sano (Chapter 4), a cultural anthropologist specializing in Deaf communities in Fiji, provides information about regional differences found in Fiji Sign Language. Information presented is also based on his own fieldwork, where he observed not only Deaf culture in Fiji but also their language use. He argues that on Viti Levu island, the main island of Fiji, there are some differences observed between the East, where Suva the capital of Fiji and the Deaf school is, and the West.

Part II is a discussion about the potential application of GIS to language data.

Lowry (Chapter 5), as a geographer and GIS specialist, provides an overview of how GIS has been applied in the context of language data processing, types of geovisualization applied to language data, and what kind of new approaches are expected in our project. He also describes what has been done in our project so far and gives insights from his own field.

Kikusawa (Chapter 6) presents some discussion as the first step toward the integration

of vertical transmission (direct inheritance) and horizontal transmissions (contact influence) using geographical points as a reference. By comparing the traditional Comparative Method where direct inheritance is exclusively examined and Linguistic Geography where horizontal transmission is the main focus of the research, she points out that the fundamental difference in the two methodologies is that with the former, the comparative axis is the cognacy where the development of forms is examined, while with the latter, the axis is the “notion.” Any forms referring to the same notion are all put together on a map for a distribution examination.

The following chapter by Kikusawa and Lowry (Chapter 7), is a description as to how this project was conducted, including practical aspects of the development of a GIS system with language data, the roles of each participants, and so on. This is the kind of information not normally presented in academic papers, however, it is a procedure researchers need to know if they are interested in developing a similar project. We hope that this chapter is useful for those who are interested in creating a GIS database.

Kikusawa (Chapter 8), reports on her visit to Namara village in Kadavu, where she conducted her pilot elicitation of data based on Geraghty’s 100 wordlist (Appendix A). The assumption is that each of the researchers on this project will be collecting additional data to be added into the system. The main purpose of visiting Namara was to get the feeling of what it would take if one was to conduct research in various villages in this project. She proposes that by reorganizing the data would help to make the elicitation process more efficient and useful for the future development of the Language GIS system.

Part III is about the dissemination of research results to the general public, in a museum and others.

Niwa (Chapter 9), a cultural anthropologist focusing on Fijian communities, shares his experience of bringing over a Fijian drama to be performed for Japanese audience. He describes the background, and analyzes aspects that were successful, as well as aspects that would have been better if prepared with extra attention to some specific cases. Niwa’s insight should be useful when we start providing a web-based system and museum exhibits based on the Fijian Language GIS Project, to make sure that the information and message we would like to convey are appropriately conveyed to the audience with different backgrounds.

Tamata (Chapter 10), is a Fijian linguist. At the time when this project started, she was a senior officer specializing in Fijian cultures and languages at iTaukei Trust Fund Board, an organization in Fiji which is in charge of developing materials for educational and public institutes. She describes how the information about Fijian languages have been disseminated to the general public in Fiji and how she foresees the future promotion of language related information to the lay audience. Although Tamata has since been transferred to The University of the South Pacific, the Fijian Language GIS Project would be very happy to be given opportunities to collaborate, to have our database utilized not only for linguistic analysis, but also for visitors who are interested in Fijian languages and cultures.

As mentioned above, this volume is a preliminary report of the on-going project. We hope that compiling such a volume helps us to move forward, to make our effort scientifically worthwhile, our product accessible to the general public, and our methodology applicable to other language groups where similar analyses are attempted. We hope and believe that when the current phase is over in a few years, we will have pushed the ideas presented in

this volume forward and many things will have come true in our endeavor.

Note

- 1) The meetings were funded by Minpaku and iTaukei Trust Fund Board in Fiji. English–Japanese–Japanese Sign Language interpretation was provided by Minpaku’s Sign Language Linguistics Research Section (SiLLR) funded by The Nippon Foundation.

References

Charpentier, J., A. François, and J. Peltzer

2015 *Linguistic Atlas of French Polynesia / Atlas Linguistique de la Polynésie Française*.
Berlin: De Gruyter Mouton.

Kikusawa, R. and S. Kinugasa

2005 An Application of GIS to Historical Linguistics. Paper presented at the 17th International Conference on Historical Linguistics (ICHL17), August 2, 2005, University of Wisconsin, Wisconsin.