

Graduate School of International  
Culture and Communication Studies  
Examination Report on the Doctoral Dissertation

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Dissertation Title · Subtitle : (English)	A Corpus-Based Study on Japanese English Rhythm
Dissertation Title · Subtitle : (Japanese)	日本語母語話者による英語リズムの習得に関する研究

\*Even if the dissertation is written in English, a Japanese language translation of the title and subtitle must also be submitted.

2022年1月17日

YYYY/MM/DD

To Dean of Graduate School of International  
Culture and Communication Studies,

Examination Committee

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The Examination Committee members report the results of the dissertation examination and the oral defense below.

1. Degree: Doctor of Philosophy (in International Culture and Communication Studies)

2. Curriculum Doctorate (*Katei Hakase*) • ~~Dissertation Doctorate (*Ronbun Hakase*)~~

\*Please delete either one.

3. Examination period

Dissertation examination: From 2021年11月4日 To 2021年12月20日  
YYYY/MM/DD YYYY/MM/DD

Oral defense: 2021年12月20日  
YYYY/MM/DD

4. The results of the dissertation examination and the oral defense

\*Please write down Pass or Fail in both categories.

Dissertation examination: **Pass**

Oral defense: **Pass**

5. Summary of the Dissertation

As per attached sheet

6. Table of Contents

As per attached sheet

7. The results of the dissertation examination and the oral defense

(About 3,000 characters in Japanese or 1,000 words in English)

(1) Evaluation and summary of the dissertation examination

(Including Summary of the Dissertation)

Mr. KONISHI Takayuki's dissertation investigated rhythmic characteristics of English produced by Japanese learners. He examined phonetic characteristics of English rhythm in relation to the phonetic and phonological features of Japanese prosody and how the first language, i.e. Japanese, influences rhythmic features when they speak English. The thesis focused on so called "isochrony of foot" in English, and how the speech rhythm of native Japanese learners of English differs from that of native English speakers. It is well known that English spoken in traditional English-speaking countries, uses the foot as the basic unit of speech rhythm. This type of English has been used as the model accent in English education in Japan. So, in his studies Mr. Konishi assessed rhythmic features of Japanese accented English in comparison with native English speech rhythm, and investigated the process of how Japanese learners acquire English speech rhythm

Mr. Konishi examined rhythmic features of Japanese accented English in relation to other phonetic and phonological characteristics of Japanese accented English, namely (a) lexical stress and vowel duration, (b) vowel epenthesis in consonant sequences, and (c) the accuracy, fluency, intelligibility and nativelikeness as assessed by raters of differing first languages. Most studies conducted on second language acquisition of English speech rhythm mainly compared the foot durations produced by native English and learner speakers.

However, the phonetic reality of foot isochrony has not yet been unanimously agreed, nor has it been fully verified acoustically. Therefore, instead of purely making comparisons of foot durations, he analysed the typical features of Japanese accented English described in (a)-(c) above, including segmental features and phonological errors, and how these features influence foot structure and duration and so affect English speech rhythm.

Mr. Konishi took a new approach to the study by adopting a corpus study. Research with corpora has become quite common in linguistics over the last 2-3 decades, but it is still less common in phonetic research because of the technical difficulties and the time required to build corpora. So, during his Ph.D, he worked on a project to build a large L2 speech corpus called J-AESOP Corpus. His study results are based on this corpus of 183 native Japanese speakers and 25 native English speakers. Therefore, the results are very convincing compared to other studies on the same topic. In order to make full use of the corpus, he needed to write numerous *scripts*, which are equation programming formulae used to depict phonetic features in speech data. The scripts he wrote in order to carry out his Ph.D. research are equivalent of approximately 90 pages and they have been made available for users of the J-AESOP Corpus. They are likely to be used for a very long time.

The dissertation consists of nine chapters. Chapter 1 is the introduction, Chapter 2 is a literature survey section on English and Japanese speech rhythm, and Chapter 3 explains how the J-AESOP Corpus was built, with a focus on annotation methodology. Chapters 4 to Chapter 7 are the main chapters discussing the results of his research. Chapter 4 discusses perceived proficiency of Japanese accented English. Chapter 5 studies realisations of lexical stress and how it affects speech rhythm of Japanese accented English. Chapter 6 examines vowel epenthesis in Japanese speakers' English, and how its frequency, duration and intensity affect foot rhythm. Then, based on the results presented in Chapters 4-6, Chapter 7 examines the foot in Japanese accented English, with a focus on foot duration with regard to number of syllables, stress and time compensation, and correlates of these phonetic features. Chapter 8 is a general discussion section and Chapter 9 is the conclusion of the dissertation.

The main contributions of Mr. Konishi's research can be summarised as below.

1. The dissertation investigated Japanese accented English from the perspective of World Englishes. Most studies of second language speech have been based on native speaker norms, which has meant that typically native English speakers of traditional English-

speaking countries have evaluated learner speakers' speech. However, given the increasing numbers of English speakers from non-traditional English speaking countries, it is important to investigate whether there are any major differences in evaluations of learners' English between raters from traditional English speaking countries and raters from other countries. So, in this study Mr. Konishi used 16 evaluators: four native English speakers, four native Japanese speakers, and eight non-native English speakers (of eight different languages other than Japanese) to evaluate fluency, segmental and prosodic accuracy, and nativelikeness. Their assessment scores were compared and it was found that there was a high inter-rater consistency regardless of the first language of the raters. This result demonstrated that it was acceptable to adopt these evaluators' ratings for the rest of the research.

2. The thesis investigated developmental changes of Japanese learners of English. The data comprised learners of all levels, from beginner learners to advanced learners. Also, the corpus contains data of 183 Japanese speakers, which means the results are based on a much larger number of subjects than is found in other studies. So, it means that the developmental data of this thesis are very convincing and can be used with confidence in future studies.
3. This study is the first time that the relationship between foot rhythm and phonetic and phonological factors has been discussed in terms of second language phonological acquisition. In Chapter 5, his acoustic investigation of lexical stress realisation of Japanese English showed differences between beginner speakers and advanced level speakers: there was greater durational reduction of lexically unstressed vowels in more proficient speech by advanced learners that was similar to that of native English speakers. The results showed that the micro control of a smaller phonological unit influences the timing control of a larger unit, i.e. the foot.
4. The investigation of Chapter 6 is truly a novel approach in this field. Vowel epenthesis in Japanese English is a very well known phonological feature and has been studied by many linguists. However, it had not been studied in relation to the acquisition of foot rhythm. His study found that advanced learners produced less vowel epenthesis than beginner learners, but that the durations of the epenthesised vowels were not statistically different between the two groups. It implied that the degree of influence of epenthetic vowels on the foot rhythm did not vary depending on the speaker's proficiency level. Another finding

is that the durations of epenthetic vowels were shorter than those of lexically unstressed vowels. These results suggested that epenthetic vowels do not change the rhythmic beat but change the durations of feet in Japanese accented English.

5. By investigating phonetic and phonological features which may appear to be unrelated to isochrony of foot rhythm, he showed that there is a difference between native speakers' speech rhythm and non-native speakers' speech rhythm. But this difference could not be identified clearly by simply comparing foot duration. His analysis also showed that as Japanese learners of English become more fluent, they develop the speech rhythm of foot isochrony. I.e. advanced learners have smaller proportional increases in foot durations in relation to the number of foot-internal syllables, which implies realisations of more isochronous feet by more proficient speakers.

All these findings and experimental approaches to investigate these features are appropriate and new to the field. This dissertation will be a useful resource for phoneticians and researchers working on acquisition of English phonology, and it fulfils the required level of the doctor degree thesis.

## (2) Summary of the oral defense (including Comments and Questions)

The viva was conducted online by ZOOM from 14:45 to 18:00 on 20 December, 2021. First, Mr. Konishi presented his research for 45 minutes, highlighting the main experiments he conducted, their methods and results. The presentation was very clear and easy to follow for the examiners as well as general participants in the audience.

Although all three examiners were happy with the experiments and their analyses, there were some points which need further clarification. First, we were a little bit concerned with a general lack of description of previous research. Especially in Chapter 2, where there is a considerable amount of research on Isochrony. However, Mr. Konishi clarified these issues in the viva.

Secondly, Chapter 6 dealt with vowel epenthesis in learner English, but there is no mention of vowel epenthesis in the literature survey section of Chapter 2. Vowel epenthesis suddenly appeared as the centre of research focus. The examiners asked Mr. Konishi to explain the reason why vowel insertion in Japanese learners of English is investigated in this thesis, and he was able to explain this with appropriate examples quoted from other literature.

Thirdly, the examiners did not follow some figures and tables because the titles of

these figures and tables were not quite correct. Mr. Konishi clarified the meaning of the titles and we understood that these were caused by simple English mistakes. He agreed with us and promised to correct the grammatical mistakes in the submitted version.

We requested Mr. Konishi to add some paragraphs to clarify the above points and the corrections have been done appropriately. There were a few typos and English language mistakes, but they were also corrected for the final version of the thesis.

So, all three examiners are happy to recommend that his dissertation meets the requirements for awarding a doctoral degree.

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