

(For JSPS Fellow)

Form B-2
(FY2018)

Date (日付)

02 日/06 月/2019 年 (Date/Month/Year: 日/月/年)

Activity Report -Science Dialogue Program-

(サイエンス・ダイアログ事業 実施報告書)

- Fellow's name (講師氏名): MANSBRIDGE MICHAEL PATRICK (ID No. P18004)

- Participating school (学校名): Gifu Prefectural Ena High School

- Date (実施日時): 01 日/23 月/2019 年 (Date/Month/Year: 日/月/年)

- Lecture title (講演題目): Using experimental psychology to study the acquisition of English by native Japanese speakers

- Name and title of your accompanying person (講義補助者 職・氏名)

Professor・TAMAOKA Katsuo

- Lecture format (講演形式):

◆Lecture time (講演時間) 40min (分), Q&A time (質疑応答時間) 10min (分)

◆Lecture style (ex.: used projector, conducted experiments)

(講演方法 (例: プロジェクター使用による講演、実験・実習の有無など))

used projector

- Lecture summary (講演概要): Please summary your lecture 200-500 words.

Psycholinguistics is the study of the interaction between linguistic behavior and psychological processes. It also concerns the study of the mechanisms and neural brain regions responsible to achieve the comprehension (reading/listening) and the production (speaking) of sentences and words. Additionally, psycholinguists also study the mechanisms behind the acquisition of languages (first, second, third, etc.). Sentence processing is incremental which means that we understand the sentences we listen to or read bit by bit. In other words, each incoming word is first activated and stored in working memory and then is combined/integrated with the current ongoing structure. This is done to not only check the features of the word itself (its grammatical role, semantics, frequency, etc.) but also its relation to the sentence context or specific words in the sentence (checking gender, number, tense, etc.). Furthermore, at each word, expectations or predictions are formed for the upcoming structure that is necessary to complete a grammatical sentence. In short, reading involves an integrate and complex series of processes to achieve comprehension. Despite reading being seemingly easy and autonomous, we often encounter difficulty during sentence processing as a result of ambiguity/misunderstanding in word or sentence meanings. However, we might not even be aware of these difficulties during reading as

difficulty can be on the scale of milliseconds. In order to test linguistic or psychological theory concerning language processing, psycholinguistics use experimental psychological methods to test their hypotheses. Methods used in our laboratory involve the recording of eye-movements and reading times, the recording of electro-neural responses, and psychological behavioral responses that can track when and where participants are experiencing difficulty during sentence processing. Concerning second language acquisition, a current theory of language processing explains the lack of sensitivity (behavioral or neurological responses) to ungrammatical syntax in a second language might result from one's high exposure to these errors (others' and their own errors). Considering that one encounters these errors at a higher rate than a typical native speaker of a given language or another learner living in the country where the second language is spoken, their mental lexicon will account for these errors as variability in the language input, thus reducing their psychological sensitivity. In other words, while one may be aware of a grammar rule, they would lack a behavioral response to it. In other words, a grammatical word might take the same time to read as a grammatical one because it is accepted as lexical variability. Testing this theory, I investigated the sensitivity of Japanese learners of English to grammatical and ungrammatical plural syntax in English (e.g., *that dogs and *those cat) using experimental psychology. The results revealed that while learners were sensitive to the errors, contradicting previous theories arguing Japanese learners of English are incapable of being sensitive to these errors (e.g., the morpheme congruence hypothesis and the shallow structure hypothesis), the sensitivity was limited to less proficient English learners. This supports the theory of lexical variability such that proficient speakers might have a greater amount of variability when their English exposure is limited to Japanese English instead of native English.

- Overall advice or comments to future participants in the program (今後の講師へのアドバイス):
Plan for a shorter time frame than the time planned. It is likely that after the introductions, the presentation time will be shortened.

- Other noteworthy information (その他特筆すべき事項):
I had planned on conducting a minirature experiment during the class, but because the presentation started about 5 minutes late, I ran out of time and could not do the experiment.

- Impressions and comments from the accompanying person (講義補助者の方から、本事業に対する意見・感想等がありましたら、お願いいたします。)