

平成 30 年 6 月 5 日現在

機関番号：17104

研究種目：基盤研究(C) (一般)

研究期間：2015～2017

課題番号：15K02788

研究課題名(和文) Investigating Fluency and Dysfluency in Gendered Discourse

研究課題名(英文) Investigating Fluency and Dysfluency in Gendered Discourse

研究代表者

Long Robert (Long, Robert)

九州工業大学・教養教育院・准教授

研究者番号：00284589

交付決定額(研究期間全体)：(直接経費) 2,700,000円

研究成果の概要(和文)：過去3年間の私の研究では、流暢さと不快感に関する問題を研究しました。私は性別と同性の参加者の談話を比較しました。私は、流暢さの差異と不調和を見つけました。さらに、私は、日本のEFL学習者のための不快感の最も顕著な領域を1つの論文で特定しました。私はまた、2つのプレゼンテーションで、男女の態度調査の発展、性別の男性の見方、お互いの出会いの頻度を調べました。私はまた、最小の応答、文法的な精度、および本物の言語を研究しました。要するに、基調講演とプレナリーを含む13の論文/プレゼンテーションが行われました。

研究成果の概要(英文)：My research for the past three years has considered issues relating to how genders interact with each other, and in differences in fluency. I found differences in speaking times and fluency rates. I also studied issues in acoustic and lexical dysfluency. In my first papers and presentations, I studied same-sex interactions and compared them with gendered discourse. Furthermore, I identified the most prominent areas of dysfluency for Japanese EFL learners in one paper. I also examined in two presentations, through the development of a gendered attitude survey, how the genders view each other, and how often they interact with one another. The other research areas I examined included minimal responses, grammatical accuracy in spontaneous language and authentic language. In short, 13 papers / presentations were conducted, including plenary and keynote addresses.

研究分野：linguistics

キーワード：Discourse analysis Fluency Dysfluency Gendered interactions Grammatical accuracy Minimal Responses Spontaneous Language Scripted Language

1 . 研究開始当初の背景

The background of this research concerned the sociological issue of hesitation phenomenon / shyness. This is causing a lack of interaction between the genders. This is resulting in fewer gendered relationships, and marriages. The result is accelerating the demographic population crisis.

2 . 研究の目的

The purpose of the study was to study how fluency/dysfluency between the genders and how it changes (if at all) between same-sex interactions. A further motive was also to explore the attitudes that the genders held of each other.

3 . 研究の方法

I conducted video-taped interactions and transcribed the interactions, and analyzed each of the discussions according to particular dependent variables relating to fluency, acoustic dysfluency, syntactical dysfluency, and lexical dysfluency.

Research plan for year 2015

This year was devoted to collecting data, particularly in regard to advertising for participants, gathering and organizing participants and videotaping them. The website was also launched at the end of this year. The research questions are as follows: 1. Is there a significant difference in fluency indicators of time talking, articulation rates, and speaking rate between the two genders? 2. Is there a significant difference in acoustic dysfluency (micropauses, amount of silence, mean length runs), lexical dysfluency (mispronounced words, word fragments, use of L1), and syntactic dysfluency indicators (abandoned sentences, retracing, repetition, average mean length runs, total syllables, number of words, meaningless syllables) in gendered and same-sex speech? 3. Is there a significant difference in correct and incorrect pausing between the two genders? Which gender, if any, had more incorrect pausing? 4. Is there more dysfluency noted with males or females?

Preliminary results were gathered and discussed into presentations. This preliminary study, based on 20 videotaped discussions between males and females who did not know each other previously, examines possible differences in fluency indicators, and in acoustic, lexical and syntactic dysfluency as well as with correct/incorrect pausing.

The second research paper examined the complexity and patterns in production in the same-sex discourse between 20 males / females who were tested at one level of proficiency. The research questions focused on: 1. Is there a significant difference in fluency indicators of

time talking, articulation rates, speaking rate, and between the MM and FF speech? 2. Concerning MM and FF speech, is there a significant difference in acoustic dysfluency (micropauses, amount of silence, mean length runs), lexical dysfluency (mispronounced words, word fragments, use of L1), and syntactic dysfluency indicators (abandoned sentences, retracing, repetition, average mean length runs, total syllables, number of words, meaningless syllables) in gendered and same-sex speech?

Research plan for year 2016

The research plan was to finalize the formation of all corpora. There was also plans to better understand the students' attitudes towards gendered discussions and how many gendered relationships they have. A survey was developed To better understand how both males and females view each other, it is important to elicit student responses about the opposite sex before and immediately after interactions that spanned three-week period. The research aims were: 1. Are there significant differences between the pre-survey and post-survey results? 2. Did the results from the post-survey indicate a more positive outlook about gendered discussions? Null hypotheses state that there will be no significant differences between the two surveys and that no variables will reflect a more positive outlook about gendered discussions. The overall study examined the interactions of three groups of male students. These 66 discussions were transcribed and form the Longitudinal Japanese University Student Corpus (LJUSC). The study had two female participants interact, one-by-one with male participants. For each group, the interactions took place over six weeks with the two female participants switching roles on a weekly basis. Participants were given the survey before their discussions and again after the three weeks of their own discussions. The research questions focused on possible significant differences between the pre-survey and post-survey results, and if the results from the post-survey indicated a more positive outlook about gendered discussions.

Research plan for year 2017

The research plan discussed the final analyses of the corpora. One focus was on the use of minimal responses. The first study All too often, gender is indirectly regulated and monitored by rather rigid social norms that can create linguistic inequalities and outcomes, particularly, in cases of L2 interactions. As hesitation phenomena has been such an important cultural factor in Japan, particularly with the L1 speech of Japanese women, it would counterproductive to ignore distinct patterns of fluency and dysfluency, particularly as they relate to minimal responses,

which could be addressed by a particular form of training. A more relevant issue is how speech and fluency may change with more contact, which brings more security and familiarity. As research has ignored this profound confounding variable, it is key to examine empirical data as to how fluency and dysfluency might change with more interactions and greater familiarity. Thus, the research questions for this study included: 1. Were there any important differences in the usage of minimal responses between the two genders? 2. Were there any significant differences in the use of minimal responses between the two groups? Did the presence of a different female discussion leader influence the use of minimal responses? 3. Were there significant differences in the use of minimal responses between sessions 1 and 3? Did different male participants use a similar or different frequency of minimal responses? Null hypotheses state that there will be no significant differences in the frequency of minimal responses over three weeks, and there were no important differences in the usage of minimal responses between the genders. For the second study on minimal responses, the research questions were as follows: 1. Were there any important differences in the kinds of MRs between the two genders? 2. What overall percentage did MRs make up of the total amount of words that were exchanged in both groups? 3. Regarding to agreement or disagreement, were there significant differences between the genders in how MRs functioned? 4. Were there significant differences in the number of MRs used in the first session and the last session? Null hypotheses state that there will be no significant differences in the kinds of MRs between the two genders or differences in how the genders show agreement. Further, it is hypothesized that participants will not reduce their use of MRs after instruction. Another focus was on grammatical accuracy in spontaneous discourse. A third focus was on using the videos / corpora for language learning experiences, and on the complexity of authentic language.

A second research aim for this year was to examine if gendered discourse and same-sex discourse differed significantly in fluency and dysfluency. Thus, this paper focuses on the variables concerning fluency, syntactical and lexical complexity to see if there are significant differences between the genders, and between gendered and same-sex interactions. It seeks to answer questions such as 'is hesitation phenomenon more marked in gendered discourse than in same-sex interactions,' and 'which gender exhibits the most fluency and dysfluency?' By comparing same-sex and gendered discourse between Japanese youth, the aim is to see if the variable of *gender* impacts lexical and syntactical

complexity. Are there key differences in gendered discussions when compared to same-sex interactions? Do these differences, in any way, relate to linguistic inequalities? Another issue concerns the balance of each type of interaction: Who is doing most of the talking? While past research has shown that men do over-talk women, there is also the issue of syntactical and lexical complexity that has yet to be addressed. The research questions were: 1. Are there any significant differences in fluency and dysfluency variables between gendered and same-sex interactions? 2. Are there any significant differences in syntactic complexity between gendered, and same-sex interactions, particularly in regard to *words, sentences, verb phrases, T-units, and clause-based data* as well as *lexical sophistication, lexical variation, TTR (Type/Token Ratio), verb diversity, and lexical word diversity*? 3. What percentage of each discourse, do minimal responses make up and which gender uses the most minimal responses? 4. In same-sex interactions, is there a difference in the use of minimal response between M-M and F-F interactions?

A third aim was to examine grammatical accuracy in spontaneous language and to see if genders differed in error rates. The first study for this research aim, focused the prevalence of errors, and which if any gender has better accuracy. A second aim is whether English teachers can identify errors as being intralingual or interlingual, and which type of error was more common. An inventory, containing 400 errors in context, was taken from this corpus for teachers to rate as being intralingual, interlingual or undetermined. As for the second study on grammatical accuracy, This study focused on the grammatical accuracy of Japanese EFL learners, particularly in gendered discourse. One aim is to investigate the prevalence of errors, and which if any gender has better accuracy. A second aim is whether English teachers can identify errors as being intralingual or interlingual, and which type of error was more common. The database for the errors came from An inventory, containing 400 errors in context, was taken from this corpus for teachers to rate as being intralingual, interlingual or undetermined. As for the first research question, the primary errors were as follows: incorrect use of articles (381), incorrect verb tense of form (162), incorrect use of prepositions (158), the omission of verbs (152), modifier error (111), and incorrect subject-verb agreement (76).

A fourth research aim was to identify most problematic kinds of dysfluency for Japanese EFL learners. This paper addressed two questions, namely: which six dysfluency variables were the

most problematic for Japanese EFL learners, and whether dysfluency changed with increases in Speaking Rate A (Wendel, 1997)? To gather data for the initial question, five categories were formed with varying speaking rates. Data was collected from 55 transcripts from gendered and same-sex discussions that took place in 2016, and form the Japanese University Student Corpus (JUSC).

4 . 研究成果

Year 2015

Results indicated for the variable of speaking time, males spoke 20.3% more than women; in addition, there was a strong difference found in fluency rates with males having a fluency rate that was 19.8% faster than female participants. For acoustic and lexical dysfluency, no significant differences were found though the speech of males had 21.2% more silence. For syntactical dysfluency, significant differences were found in mean length runs, number of words and meaningless syllables, with males producing up to 39.8% more speech than females. No significant differences were found concerning correct pausing and incorrect pausing though males had higher rates of incorrect pausing. Important differences in fluency were evident with females speaking less, having shorter mean length runs than males, and slower speaking rates. Results indicated that for the fluency variable of speaking time, there was no significance found between the two genders, though females averaged 76.8 seconds in cross-talk pausing whereas males averaged 5.2 seconds. There were also no significant differences for articulation rates, and speaking rates. Females were 26.7% more silent than males, and mean length of pauses differed slightly, with women pausing 5.7 seconds and men 3.6. As for dysfluency, no significant differences were found for acoustic dysfluency whereas only weak significance was evident for the use of L1 for variables relating to lexical dysfluency. With syntactical dysfluency, only the variable of meaningless syllables produced the only significant difference, with males averaging 53.9 syllables in their speech compared to 21.7 for women. Men did talk longer than women, averaging 384.9 words compared to 312.7 for women; similarly, men had longer average mean length runs, with 11.96 syllables compared to 8.89 for women. Females paused correctly twice as often than males, whereas males incorrectly paused twice as much as females. Thus, differences do exist in same-sex interactions between the two genders in regard to the amount of silence in cross-talk exchanges, meaningless syllables, correct/incorrect pausing, and with the amount of speech that was produced.

Year 2016

The JUSC Corpus with analysis was finished, containing 61 transcripts, and 108,137 words; without analysis, the corpus was 51,061 words. Also research was conducted to see if the issue of familiarity would reduce minimal responses, so a longitudinal study was conducted with males and females meeting three times. This corpus (LJUSC) or Longitudinal Japanese University corpus was produced with 65 transcripts, 71,431 words. The final corpus of advanced EFL learners was compiled with 6 transcripts, 16,230 words. These corpora are found at <http://genderfluency.com/conversations/corpora/> and the videos can be found on Youtube: https://www.youtube.com/playlist?list=PLPRLY1xK6EnyL7w6auVV4nvQODZ4T_GiT and <http://genderfluency.com/conversations/>. The results from the survey showed no significant difference between the pre- and post-survey results, but the participants were more positive about having follow-up discussions, and in sharing ideas without hesitation. Participants also felt that they had paid attention to what had been said, and had achieved their own goals. Recommendations focus on teachers providing more varied and challenging interactions for students to become more motivated when talking to the opposite sex. Further research, with a final version of a survey along with a questionnaire followed, with the data published in 2018.

Year 2017

For the first study results showed no significant differences between the two genders and two groups, and males tended to give more one-word responses than women, (61.5% more) whereas, in the second group, males tended to say *yes* more than women (72 to 19). There were also no significant differences between the genders in regard to the use of minimal responses over the three weeks of interactions. Recommendations focus on helping students to be more aware of the frequency of their minimal responses and how to extend on their comments and views. For the second study on minimal responses, results showed that there were important differences found between males and females with *uh-huh*, *oh*, *yeah*, and in one-worded replies. For both groups, minimal responses made up a total of 10% to 24% of the discourse. The results indicated the differences in how genders communicate and the need for EFL/ESL education to help students to be more productive in their interactions.

For the second research aim, (whether gendered discourse and same-sex discourse differed significantly in fluency and dysfluency) results showed a significant difference in the speech

between males and females in regard to speaking rates and number of words, but no significance was noted between gendered and same-sex interactions, or for the variables in lexical and syntactical complexity. In answering the first research question as to whether or not there was a significant difference between gendered and same-sex interactions, table 2 shows the descriptive statistics for both groups. There were no significant effects found. Likewise, for acoustic dysfluency variables and lexical fluency variables, no significance was found; however, for syntactical dysfluency, no significant differences were found for abandoned sentences, retracing, repetition, total syllables, number of words and meaningless syllables, but a strong significant difference was found for mean length runs, $[F(1) = 3.022, p = 0.0849]$. In regards to the questions concerning syntactical complexity between gendered and same-sex discourse, see tables 11, no significance was found for all of the variables, with p-values ranging from 0.928 (MLS) to 0.236 (CP). While in previous research, for the number of words, there was a significant difference with males speaking more than females. However, while FF interactions had an overall 590 fewer words than MM interactions, when comparing these same-sex interactions with gendered, there was no significant difference: for gendered interactions $M=639, SD=182.6$, for SS, $M=845.0, SD=373.9$; $t(14) = 2.145, p < 0.257$. Males in MM conversations used more verb phrases (29.8) than females in FF discourse (19). Likewise, in comparing the lexical complexity of gendered and same-sex, no significance was found for all of the variables, with p values ranging from 0.986 to 0.124. In comparing this to male-to-male speech, as in the data found in transcript 56 Session 9, male 1 produced had a higher number of words produced (448) compared to male 2 (307). Nevertheless, this production also means that male 1 had a double the number of meaningless syllables (54) compared to (26) for male 2. For fluency, the speaking rate for male 1 (80.3) was lower than male 2's, (104.2). The results indicate that there was some difference between the genders when it comes to speaking rates and to the number of words. Males often did produce far more words than females, averaging 405 words for this corpus, compared to 270 for female participants. Likewise, the speaking time, for males, was an average 313.5 seconds compared to 263.8 for females. Furthermore, it is apparent that no significant differences exist regarding syntactical and lexical complexity between same-sex and gendered discussions. Small differences were found with males producing more speech, but also having more meaningless syllables. FF interactions produced fewer words (3451) than

MM (4041) or gendered interactions (3834), and so this directly affected other data, such as dependent clauses, FF interactions had 19 compared to MM discussions, which averaged 29.8 instances, or gendered, having 21.3 examples. While most of the variables for lexical complexity showed no significance, there was some difference in number of different words between the MM (203.4) and FF (150.4) groups. As for the third and fourth research questions, the findings that males use more minimal responses than females tend to indicate that males tend to be more reserved when speaking, and that negation was used four times more often than with females. Overall, this data does show that while gender is not such an important variable in L2 discourse between Japanese youth, it is apparent that fluency research needs to be expanded beyond the constructs of complexity, accuracy, and fluency (CAF) to take into account issues relating to production, depth, coherence, and interactivity, see table 14, for specific measures of these variables.

As for the third research aim on grammatical accuracy in spontaneous speech, (first study), As for the first research question, the primary errors were as follows: incorrect use of articles (381), incorrect verb tense of form (162), incorrect use of prepositions (158), omission of verbs (152), modifier error (111), and incorrect subject-verb agreement (76). As for possible gender differences, females were found to be more accurate in regard error free clauses per 100 words, clauses with errors per 100 words, and in error rate percentages. As for the second research question, the interpretability and recognition of errors, interrater reliability (IRR) for native English teachers was 22% agreement compared to 12% for the Japanese English teachers with Krippendorff's alpha reliability estimate of a low .0170 reliability. It was concluded that knowledge itself of grammatical forms does not necessarily reflect awareness and impact usage. It was concluded that educators need to focus on getting students to *use* the grammatical forms in ever increasing complexity and in various kinds of interactions in order for them to truly master them. The results from the second study showed females were found to be more accurate in regard to the error free clauses per 100 words, clauses with errors per 100 words, and in the error rate percentages. It was concluded that knowledge itself of grammatical forms does not necessarily reflect awareness and impact usage. Educators need to focus on getting students to *use* the grammatical forms in ever increasing complexity and in various kinds of interactions in order for them to truly master them.

As for the fourth research aim on the primary areas of dysfluency, Results showed that the six most problematic kinds of dysfluency included mean length runs (MLRs), number of words, total syllables, cross-talk pausing, amount/percentage of silence, and speaking rates A/B. As for the second research question, data showed significant differences in cross-talk pausing (which doubled), mispronounced words, repetition, and meaningless syllables. Fluency did improve with regard to MLRs. This indicates that while some aspects of fluency do improve with speaking rate, various other aspects of dysfluency also increase. As the most serious issue of dysfluency is that of poor production (number of words), more effort should be focused on getting students to talk longer and with more syntactic complexity.

5. 主な発表論文等 〔雑誌論文〕(計4件)

1. Investigating Syntactical and Lexical Complexity in Gendered and Same-sex Interactions. (2018), *English Language Teaching*, 11, (6), 121-141. 査読有
2. Delving into Dysfluency. (2017), *The Language Teacher*, May-June, 17-23. 査読有
3. Fluency and Dysfluency in Same-sex Interactions: Preliminary Results. (2016), Proceedings for the International Journal of Arts and Sciences Conference, 227-238. 査読有
4. Gendered Fluency and Dysfluency: Preliminary Findings. (2016). Proceedings for the IAFOR International Conference on Language Learning, ISSN: 2189-1044, 91 – 108. 査読有

[学会発表](計7件)

(1 plenary, 1 keynote)

1. Interesting and Distinctive Aspects of Spontaneous and Authentic Language. Paper (Keynote) given to the International Conference on Language, Medias, and Culture (ICLMC) 2018, Fukuoka, Japan. March 26-28th.
2. Minimal Responses in Gendered L2 Interactions. Paper (Plenary) given to the 27th International Conference on Psychology & Language Research (ICPLR), 2017. Bangkok, Thailand, December 28-29th.
3. Talking Across the Gender Gap: Exploring Minimal Responses in Gendered L2 Interactions Over Three Weeks. Paper given for the International Academic Multidisciplinary Research Conference (ICBTS) 2017, Munich, Germany, May 4-6.
4. Exploring Japanese Student Attitude Change to Gendered Interactions.
協会： Paper given for the International

Conference on Language, Media, and Culture (ICLMC, 2017), [International Economics Development and Research Center], Kyoto, Japan, March 25,- 27, 2017

5. Online Learning, Fluency and Dysfluency, Paper presented at the Kitakyushu JALT Conference, (Well Tobata), Kitakyushu-city, January 14, 2017.

6. Fluency and Dysfluency in Same-sex Interactions: Preliminary Results. Paper presented at International Journal of Arts and Sciences, FWien University of Applied Sciences of WKW, Vienna, Austria, April 17 – 21, 2016.

7. Gendered Fluency and Dysfluency: Preliminary Findings. Paper presented at the IAFOR International Conference on Language Learning 2016, Dubai, UAE, February 27-29, 2016.

〔その他〕
ホームページ等

www.genderfluency.com

Contains videos and corpora of all Interactions and other resources

6. 研究組織

(1) 研究代表者

LONG, Robert

九州工業大学・教養教育院・准教授

研究者番号：00284589