## The purpose of this study

To investigate effects of cognitive processing on conversation through a quantitative language analysis.

## Method

### Sample
10 Japanese university students ($M_{\text{age}} = 20.50, SD = 1.36$)

### Design
- **within-subject design**
  - **"Priming"**: Scrambled Sentence Tasks with gender-related words
  - **"Control"**: Scrambled Sentence Tasks with gender-irrelevant words

### Procedure
- $\times 2$ (on another day)
- "What do you think virtue and vice of social gender differences?"
  - from 15 to 30 min discussion
  - in opposite-sex dyads

### Data Making
- $\times 10$ conversations
- $\times 85,020$ letters
- MeCab
- $2,914$ morphemes
- common / self-sufficient

### Extraction:
- $N = 2,914$
- $V. Adj.$
- $N = 2,443$
- $V. Adj.$
- $N = 245$
- $N = 122$

## Results & Discussion

### Table 1: Appearance Ratio (%)

<table>
<thead>
<tr>
<th>ID of the Conversation</th>
<th>1-p</th>
<th>1-c</th>
<th>2-p</th>
<th>2-c</th>
<th>3-p</th>
<th>3-c</th>
<th>4-p</th>
<th>4-c</th>
<th>5-p</th>
<th>5-c</th>
</tr>
</thead>
<tbody>
<tr>
<td>society (shakai) self (jibun)</td>
<td>4.39</td>
<td>.93</td>
<td>2.95</td>
<td>.00</td>
<td>1.67</td>
<td>3.07</td>
<td>.58</td>
<td>2.07</td>
<td>1.34</td>
<td>1.00</td>
</tr>
<tr>
<td>great (sugoi) can do (dekiro)</td>
<td>.00</td>
<td>.47</td>
<td>4.26</td>
<td>.29</td>
<td>2.22</td>
<td>2.94</td>
<td>1.45</td>
<td>1.75</td>
<td>1.57</td>
<td>.75</td>
</tr>
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<td>...</td>
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</tr>
</tbody>
</table>

Sum (%): 100 100 100 100 100 100 100 100 100 100

In parentheses: Japanese pronunciation

### t-test for each word (between p & c)

- **"Women"**
  - $M_p = 6.49, SD = .98$
  - $M_c = 3.57, SD = 1.28$
  - $t(7.50) = 4.04, p = .004$

- **"Men"**
  - $M_p = 4.34, SD = 1.44$
  - $M_c = 3.74, SD = 2.57$
  - $t(6.29) = .45, p = .66$

**"Women" was mentioned specifically more frequently in the condition after being primed with gender stereotype.**

### Collocations with “women” ($T \geq 1.65$)

- **men (dansei)**
  - $p: T = 3.55$
  - $c: T = 1.75$

- **more than (hous)**
  - $p: T = 3.99$
  - $c: T = 2.13$

- **job (shigoto)**
  - $p: T = 2.15$

- **role (yakuwari)**
  - $p: T = 1.65$

The two word "job" and "role" collocated only in priming condition, which suggested the priming effect which increased the accessibility to gender-related notions and the possibility that this accessibility biased the contents of conversations.