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1. Introduction

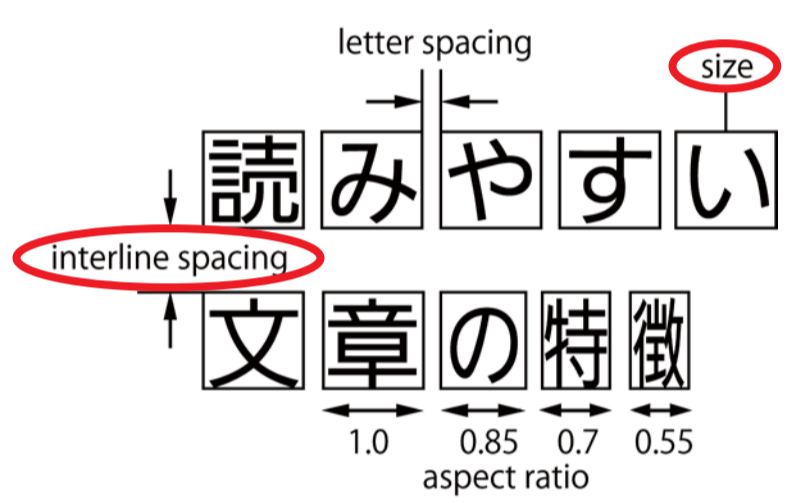
Purpose

- Do legible texts (enhance user's comprehension? relieve their stress?)

empirical approach to **designing manuals**

Background

- Increase of information needed for instructional manuals
- Trade-off between cost and legibility



Character size and interline space have a strong effect on legibility of text

Conclusions

- No clear correlation existed between the legibility of texts and user's comprehension
- Possibility to control emotional response by text legibility

- Accuracy rates based on text formats had no significant differences in both the handling and the proofreading tasks
- LF/HF rate went down in the most legible text condition (proofreading task)

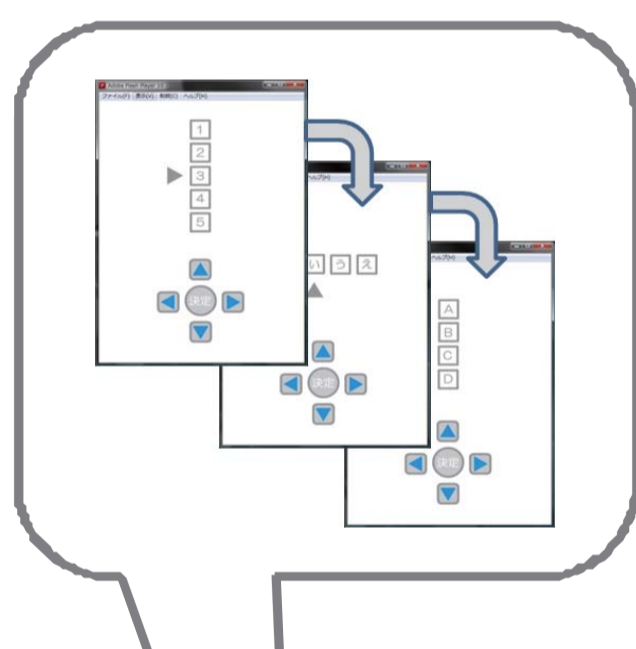
2. Handling Task

Method

examples of 4 different formats

- ① size 10 point interline space 0.6
- ② size 10 point interline space 0.2
- ③ size 6 point interline space 0.6
- ④ size 6 point interline space 0.2

virtual console



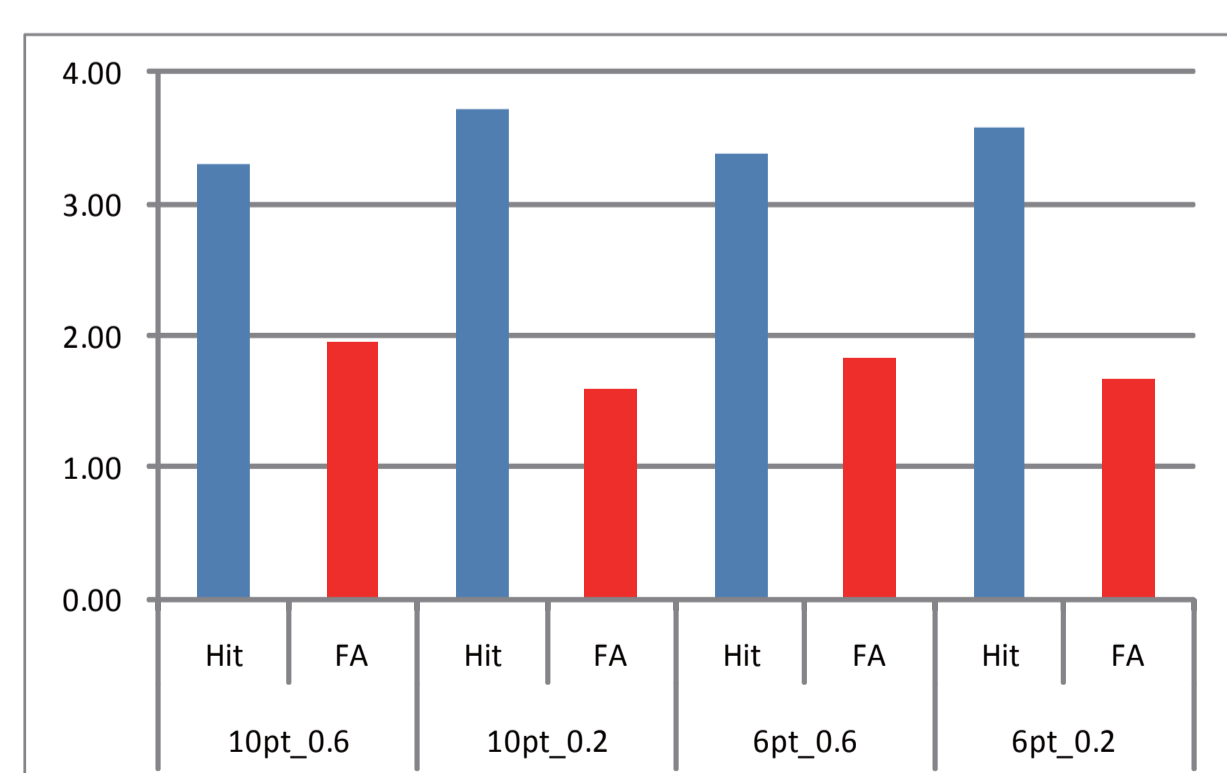
Examples of text snippets from the four different formats, showing varying levels of readability and spacing.



- 24 subjects (male 12/ female 12)
- aged 35~69
- normal color vision and 20/25 vision or corrected vision
- recognition tasks after handling a virtual console (3x10 sequences)

Results

- Hit rate and false alert of recognition tasks in the 4 different formats



There were no clear differences based on different text format

3. Proofreading Task

Method

examples of 2 types of Interpolation in a text

- A) What does not need memorizing (e.g. 大量 → 大漁) ... homonym (e.g. 成熟 → 熟成) ... flip word order
- B) What requires memorizing (e.g. 4000 → 3000) ... numerical number (e.g. 中欧 → 東欧) ... place-name (e.g. カロチン → カテキン) ... similar word

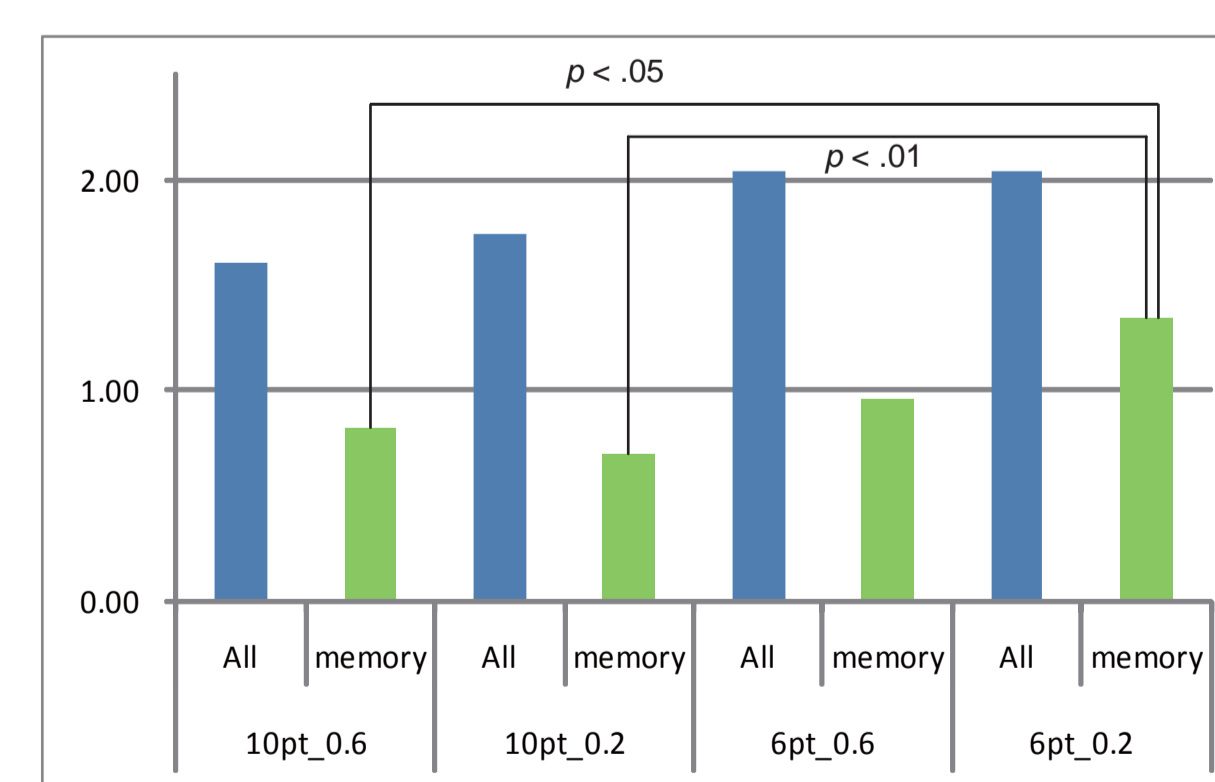
Examples of text with red-penciled corrections for interpolation errors.



- Subjects red-penciled an interpolated text after reading a original text within 5 minutes

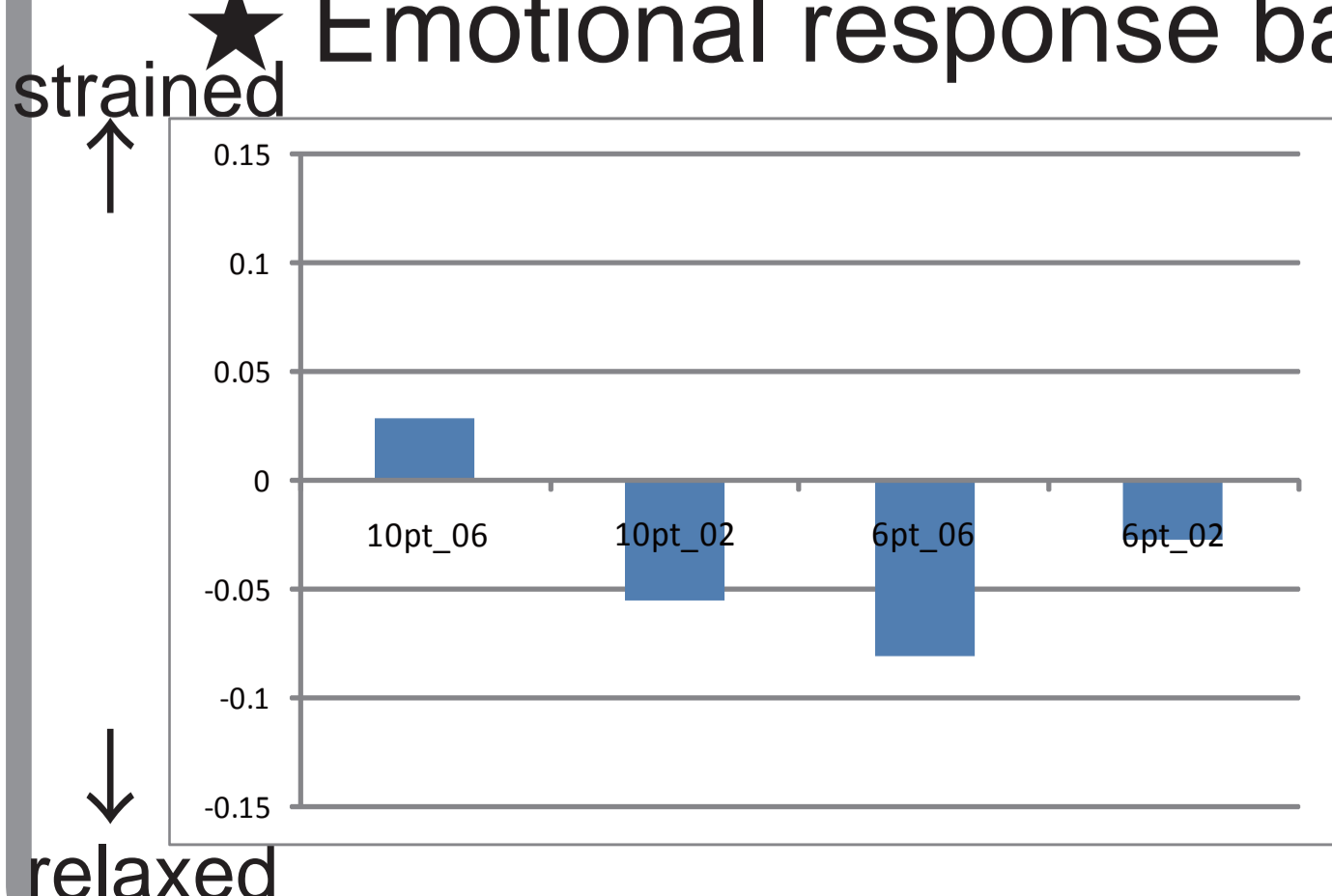
Results

- Average of correct answers

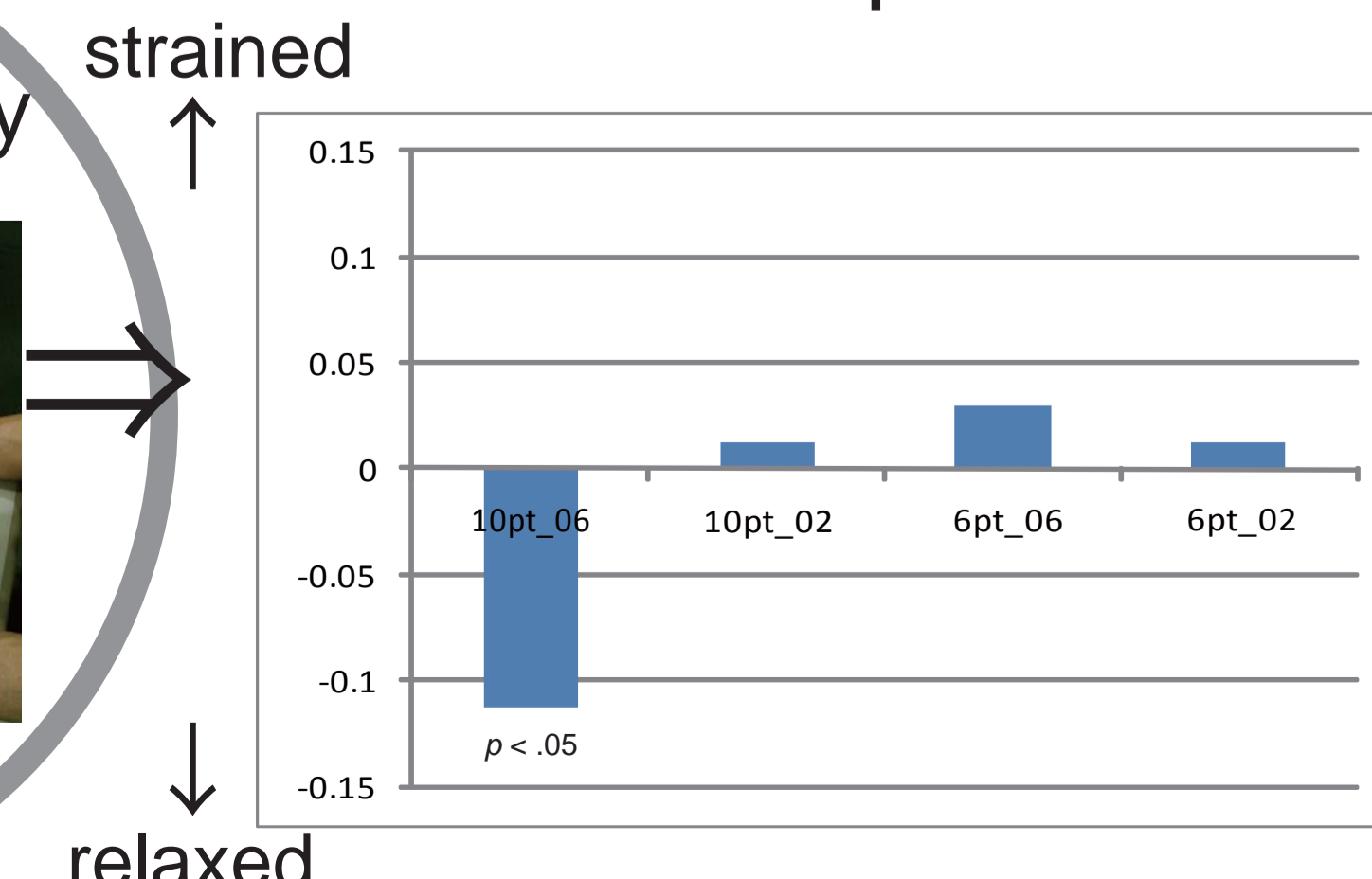
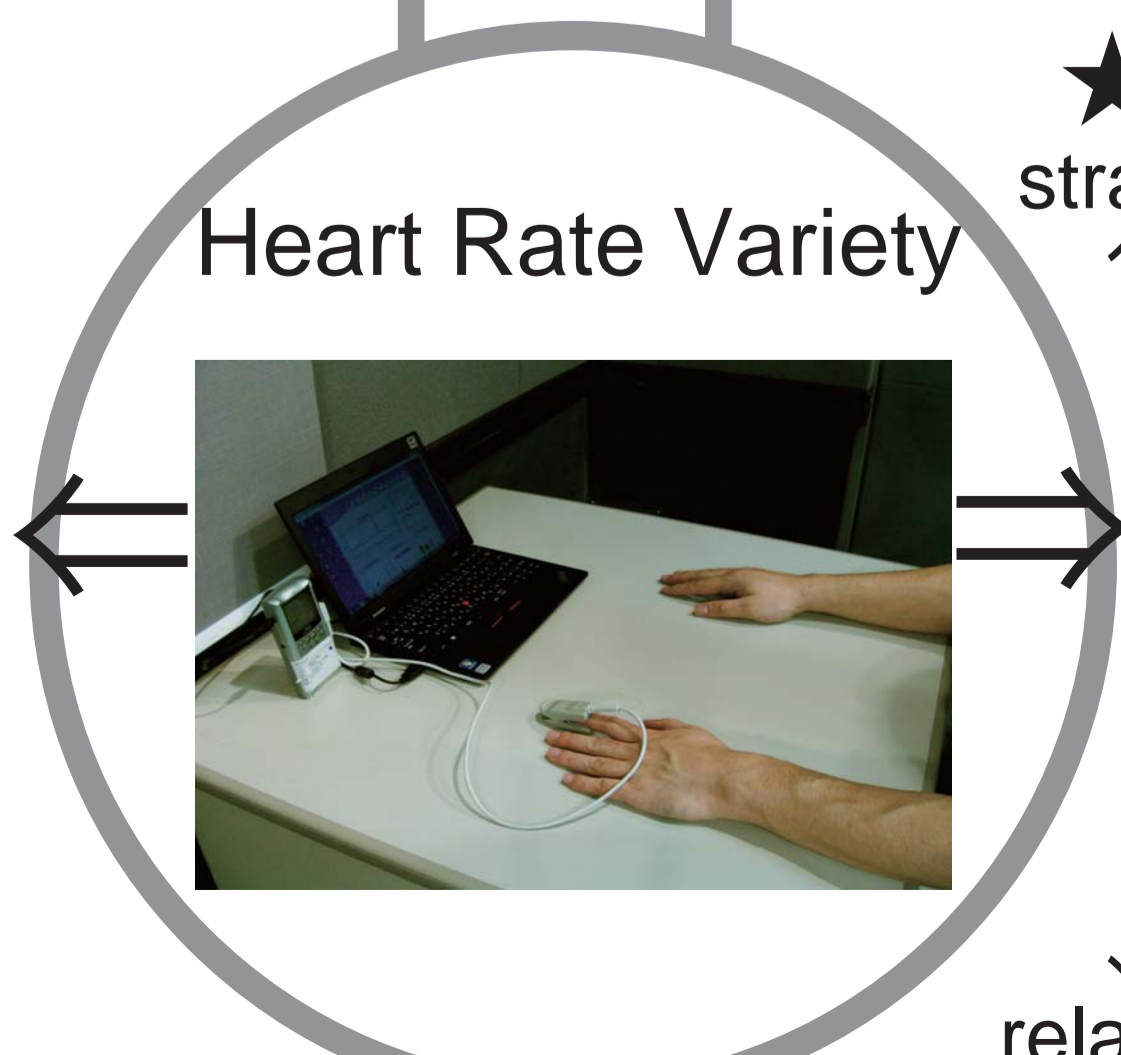


Concerning type B, more words were corrected in the most illegible text

★ Emotional response based on LF/HF



There were no significant LF/HF moving in each format



LF/HF went down significantly in the most legible format (size :10pt, interline space : 0.6)