



# Linking font legibility and preference

Yeha Cha & Chai-Youn Kim / School of Psychology, Korea University



## Introduction

- Text legibility deteriorates under reduced visibility, calling for typographic adjustments. Previous studies suggest that longer serifs enhance legibility (Arditi & Cho, 2005), while others indicate that the such effects of serif length depend on contrast (Minakata et al., 2023).
- As digital communication grows in daily life, fonts are now more often actively chosen and used than merely read. User preference plays a role in font selection, yet the link between legibility and preference remains unclear.

## Research Question

This study investigates how serif and contrast—as typographic features—influence both legibility and preference under different visibility conditions (i.e. small and large font sizes), and examines the relationship between them.

## Methods

### Participants

- 17 participants (5 males)
- Aged 21–27 (23.8,  $\pm 1.6$ )

### Stimuli

- 6-letter string

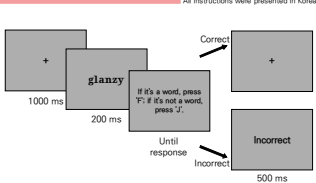


### Conditions

- Size (2) X Serif (3) X Contrast (3)
- Serif: small ornamentations at stroke endings
- Contrast: the ratio of the thickest stroke to the thinnest stroke

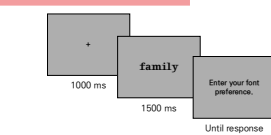
### Procedures

#### Session 1 – Legibility



- Lexical decision task
- Accuracy (Acc) and Reaction time (RT) were collected.
- Higher accuracy and shorter reaction time were considered as greater legibility.

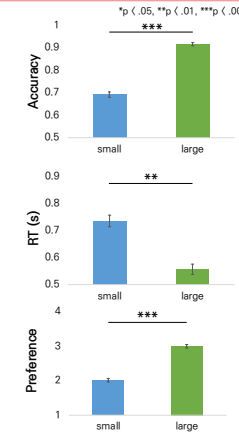
#### Session 2 – Preference



- 4-point likert scale to measure Preference.

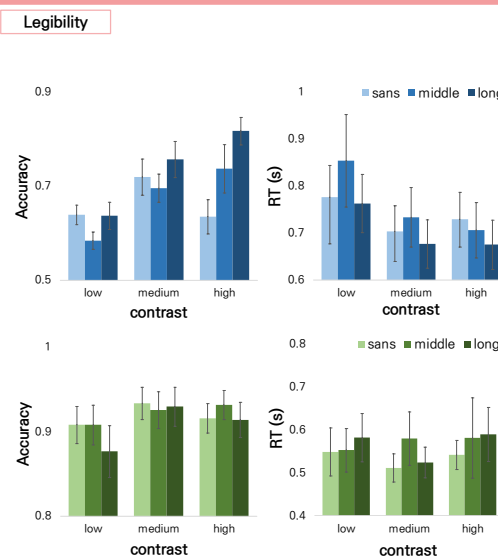
## Results

### Impact of Visibility on Legibility and Preference

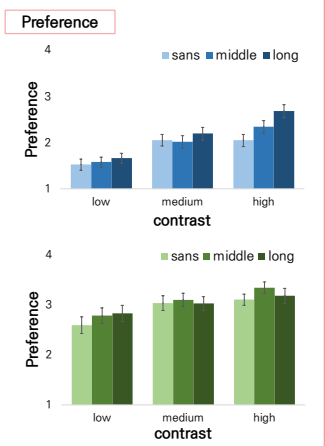


- Compared to **small fonts**, **large fonts** resulted in significantly better legibility (higher Acc, shorter RT), as well as greater preference.

### Differential Impact of Typographic Features Based on Visibility

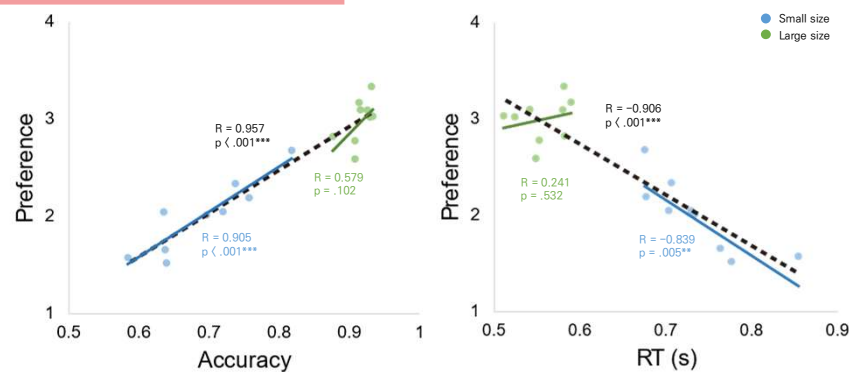


- Small size:** Legibility was significantly affected by serif, contrast, and the interaction between them.
  - Acc tended to increase with longer serifs and higher contrast.
  - RT was slower for middle serif compared to the long serif.
- Large size:** Among the legibility measures, Acc was significantly affected by serif and contrast, while RT was not. There was no significant interaction between the two factors.
  - Acc was higher with medium serif than long, and a linear increase across contrast levels.
  - RT showed no significant differences across serif or contrast conditions.



- Small size:** Preference increases with longer serifs and higher contrast.
- Large size:** Preference was higher for long and middle serifs, and medium contrast than low contrast.

## Linking Legibility and Preference



- Preference** is positively correlated with Acc and negatively with RT, indicating that higher legibility is associated with preference.
- When analyzed by size conditions, this tendency was maintained in the **small size** condition, but not in the **large size** condition.

## Conclusion

- The typographic features of fonts, serif and contrast, enhanced legibility, particularly at small font size where text is harder to perceive. Longer serifs and higher contrast improved both accuracy and reaction time.
- Preference was consistently higher for fonts with longer serifs and higher contrast, even when legibility was uniformly high at large sizes.
- These findings suggest that legibility is not solely about making text easier to see—it also plays a meaningful role in shaping how much users like what they read. In this sense, typographic design choices affect not only performance but also user experience.

## References

- A. Arditi & J. Cho (2005). Serifs and font legibility, Vision Research, 45(23), 2926–2933
- K. Minakata et al., (2023). The effect of serifs and stroke contrast on low vision reading, Acta Psychologica, 232, 103810.