

Examination of Whether Fluency Affects Perceptions of Truth

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Introduction

- Fluency, or ease of processing, has been argued to underlie a variety of effects.
 - Reber and Schwarz (1999) found that statements presented in an easy-to-read font color were more likely to be deemed true than those in a difficult-to-read (i.e., disfluent) font color. They attributed the effect to fluency.
 - Rhodes and Castel (2008) noted that people give higher judgments of learning (JOLs) to large font items than to those in small fonts. They also attributed this effect –the font size effect– to fluency.
- In a prior study, we tested the fluency account of the font size effect by presenting statements in large (i.e., fluent) and small (i.e., disfluent) fonts. We reasoned that if fluency underlies the font size effect, then statements in large fonts should be more likely to be rated true than those in small fonts. Yet, we found no differences in participants' evaluations of truth for the two font sizes.
- The present study examined whether we could replicate Reber and Schwarz' results using our statements as stimuli given concerns about changes in stimuli being the basis for the lack of a font size effect in our prior experiment.
- Logic:
 - Replicating Reber and Schwarz' finding that statements in fluent colors are more likely to be judged true than those in disfluent colors would cast doubt on fluency being the basis for the font size effect.
 - In contrast, if no differences in evaluations of truth are found using their method with different font colors, then it would suggest that our statements were sufficiently different than Reber and Schwarz', thereby not providing a true test of whether fluency is the basis for the font size effect.

Hypotheses

- True and familiar statements presented in a fluent color were expected to garner more "true" evaluations than false and unfamiliar statements in a disfluent color.
- Confidence ratings were expected to be higher for true, familiar and fluent statements than for false, unfamiliar, and disfluent statements.

Method

Participants

- 37 UAH students (M age = 19.62, SD = 2.03)
- 78% Female

Design

- 2 (Block) x 2 (Familiarity: Familiar, Unfamiliar) x 2 (Statement Veracity: True, False) x 2 (Statement Color Fluency: Fluent, Disfluent)
- All manipulated within subjects

Materials

- 64 Statements (32 per Block)
- ½ Familiar, ½ True, ½ Fluent

Example Statements

Familiar/True

- Franklin is the last name of the man who showed that lightning is electric.
- When a person purposely betrays his country it is called treason.

Familiar/False

- The name of the mythical lumberjack is Davey Crockett
- The last name of the man who assassinated Abraham Lincoln is Johnson.

Unfamiliar/True

- The standard pieces in chess are of Staunton design.
- The city in which the Parthenon is located is Athens.

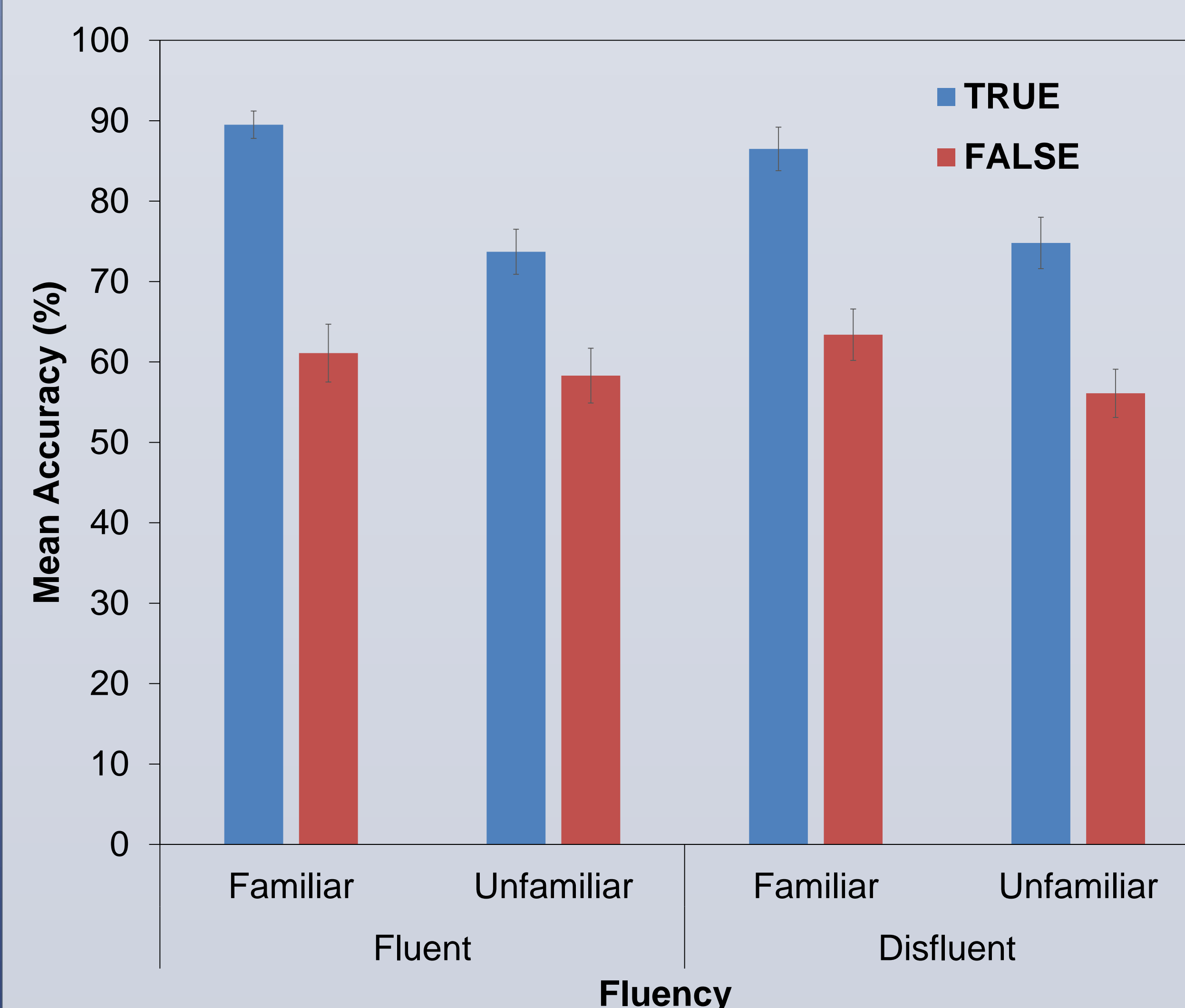
Unfamiliar/False

- People who make maps are stenographers.
- Bubinga is the name of the lightest known wood.

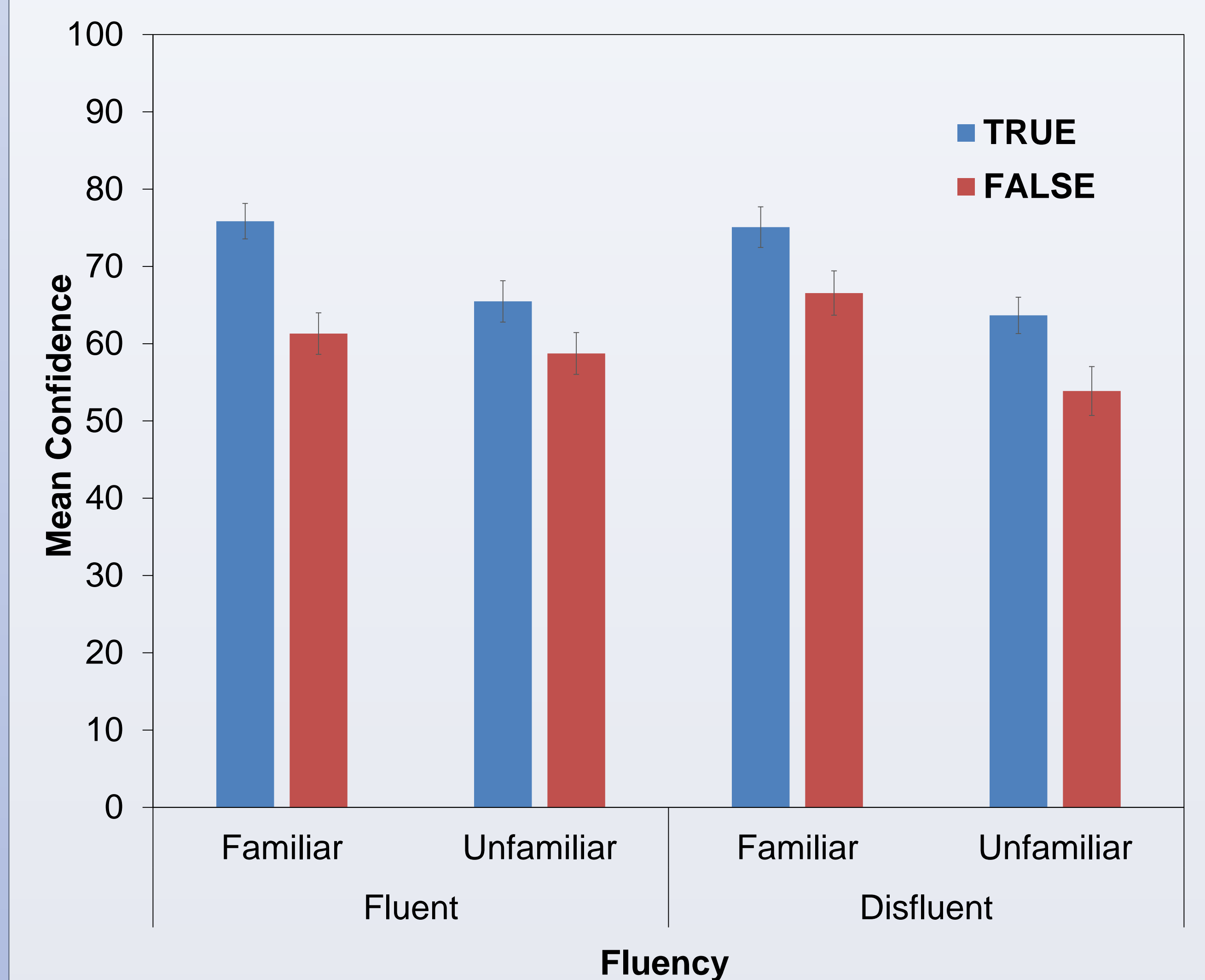
Procedure

- Participants viewed statements for 5 sec
- Participants evaluated each statement as True or False
- Participants provided confidence rating that evaluation of statement is accurate

Statement Evaluations



Confidence Ratings



Conclusions

- Participants more accurately evaluated the statements' veracity when the statements were true and familiar than when they were false and/or unfamiliar.
- Participants expressed more confidence for True statements regardless of Fluency or Familiarity.
- Findings from Reber and Schwarz' (1999) study were not replicated.
- No significant differences in evaluations of truth as a function of fluency were found.
- Our statements were sufficiently different than those used by Reber and Schwarz (1999).
- Not an adequate test of whether fluency is the basis for the font size effect.

References

- Reber, R., & Schwarz, N. (1999). Effects of perceptual fluency on judgments of truth. *Consciousness and Cognition*, 8, 338-342.
- Rhodes, M. G., & Castel, A. D. (2008). Memory predictions are influenced by perceptual information: Evidence for metacognitive illusions. *Journal of Experimental Psychology: General*, 137, 615-625. doi: 10.1037/a0013684