

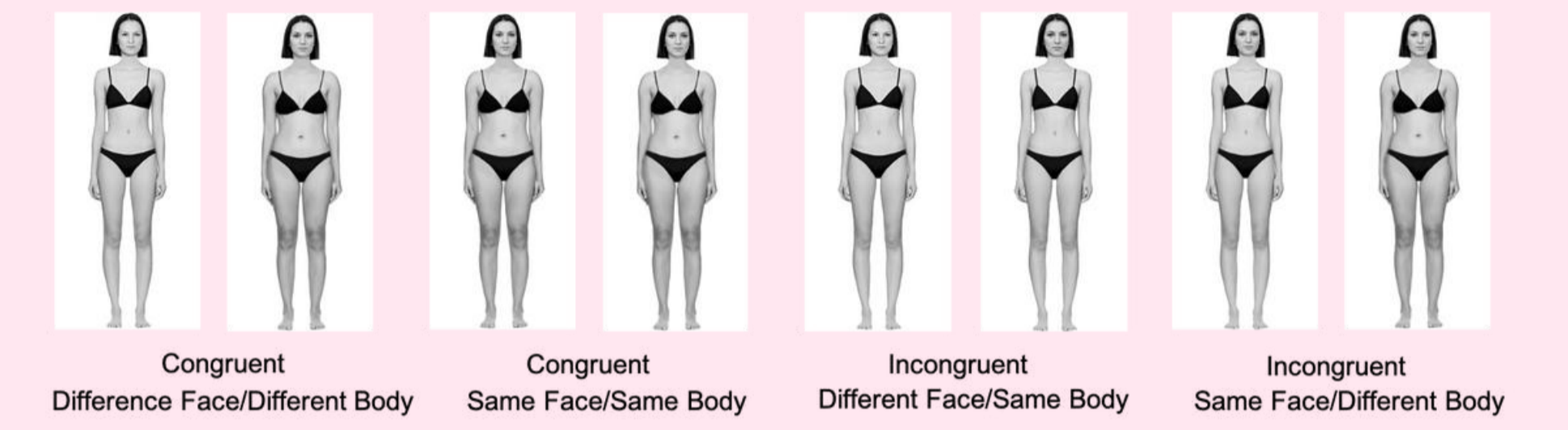
Background

- Many paradigms have been evidenced by extensive research in face perception, such as the **composite face illusion**, the **composite effect**, the **congruency sequence effect**, and **holistic vs. analytic perception**
- **Research Inquiry:** Are judgments of the face influenced by the presence of varying bodies, is this influence impacted by congruent and incongruent trial representations, and is this possible body influence holistic or analytic.

Hypotheses

Hypothesis 1: Congruency

Congruent trials will have an increase in accuracy and decrease in reaction times compared to incongruent conditions.



Hypothesis 2: Alignment

An increase in accuracy and decrease in reaction times in misaligned trials compared to accuracy and reaction times in aligned trials.



Hypothesis 3: Morph levels

Similar morph levels, harder difficulty, will have a decrease in accuracy and increase in reaction times compared to dissimilar morphs, easy difficulty.

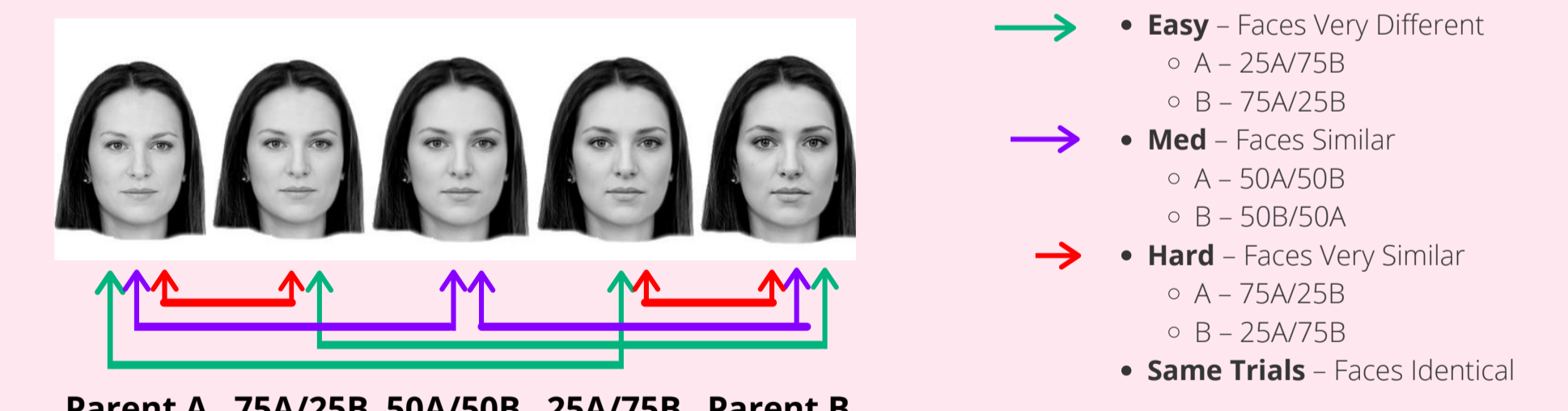


Figure 1. 5 different face morph levels created using Abrosoft FantaMorph

Methods

- N = 38
- Morphs created using Abrosoft FantaMorph 5 (Figure 1).
- Face and body combinations constructed using Adobe Photoshop software.
- A sequential matching task requiring **same-different** responses based on faces presented in a whole person context was utilized

Measures

- Accuracy (% correct)
- Reaction Time (ms)

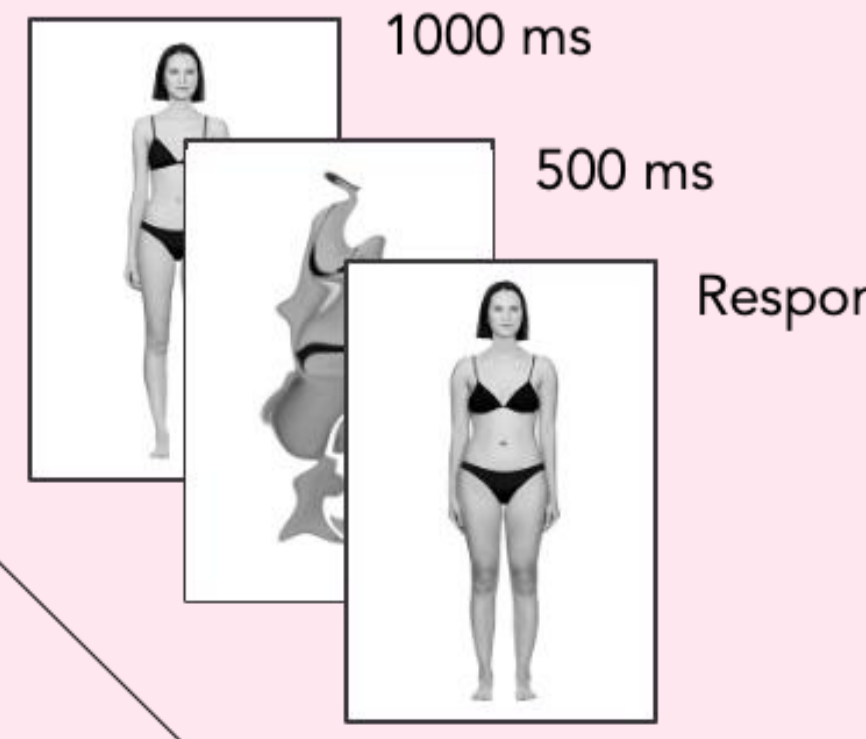


Figure 2. Timeline of one trial

Evaluating faces and bodies: Does body information influence face perception?

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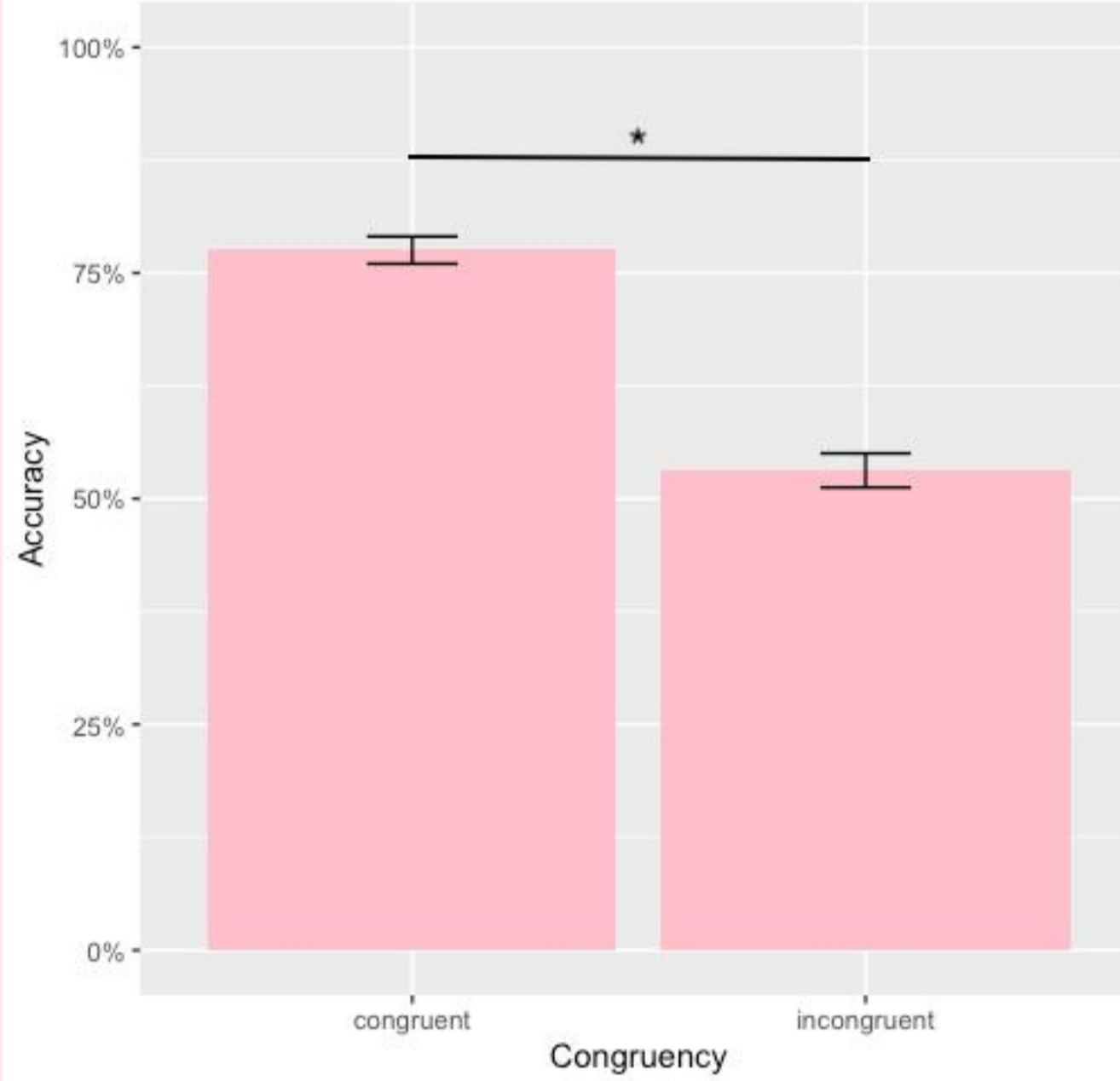


Figure 3. Accuracy measured as a function of congruency. A significant difference was found between congruent and incongruent trials (p<.001).

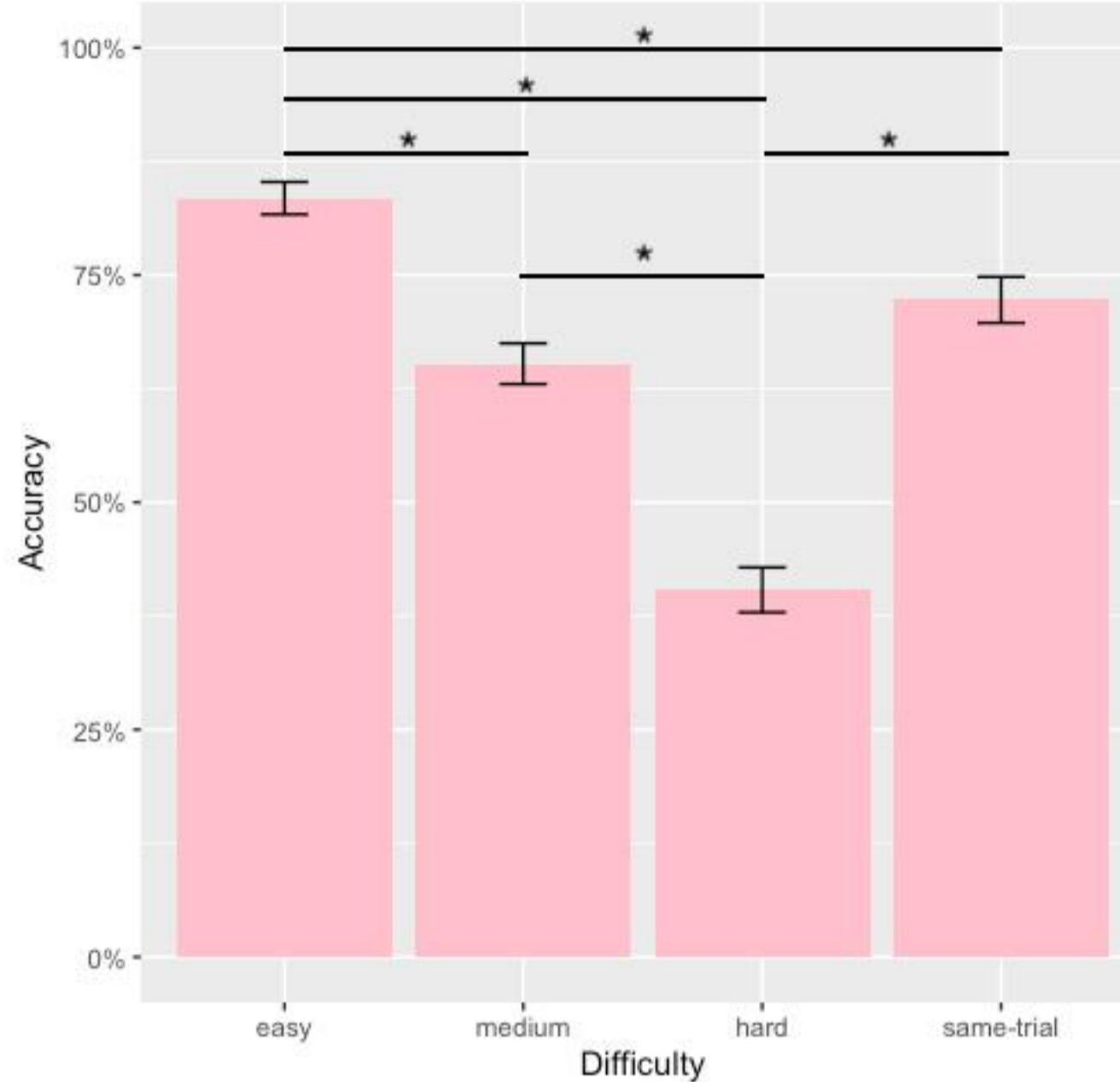


Figure 4. Accuracy as a function of difficulty level. Significant differences were found between "easy" and "medium", "easy" and "hard", "easy" and "same-trial", "medium" and "hard", and "hard" and "same-trial" difficulties (p<.05). There were no significant differences between the "medium" and the "same-trial" conditions (p>.05).

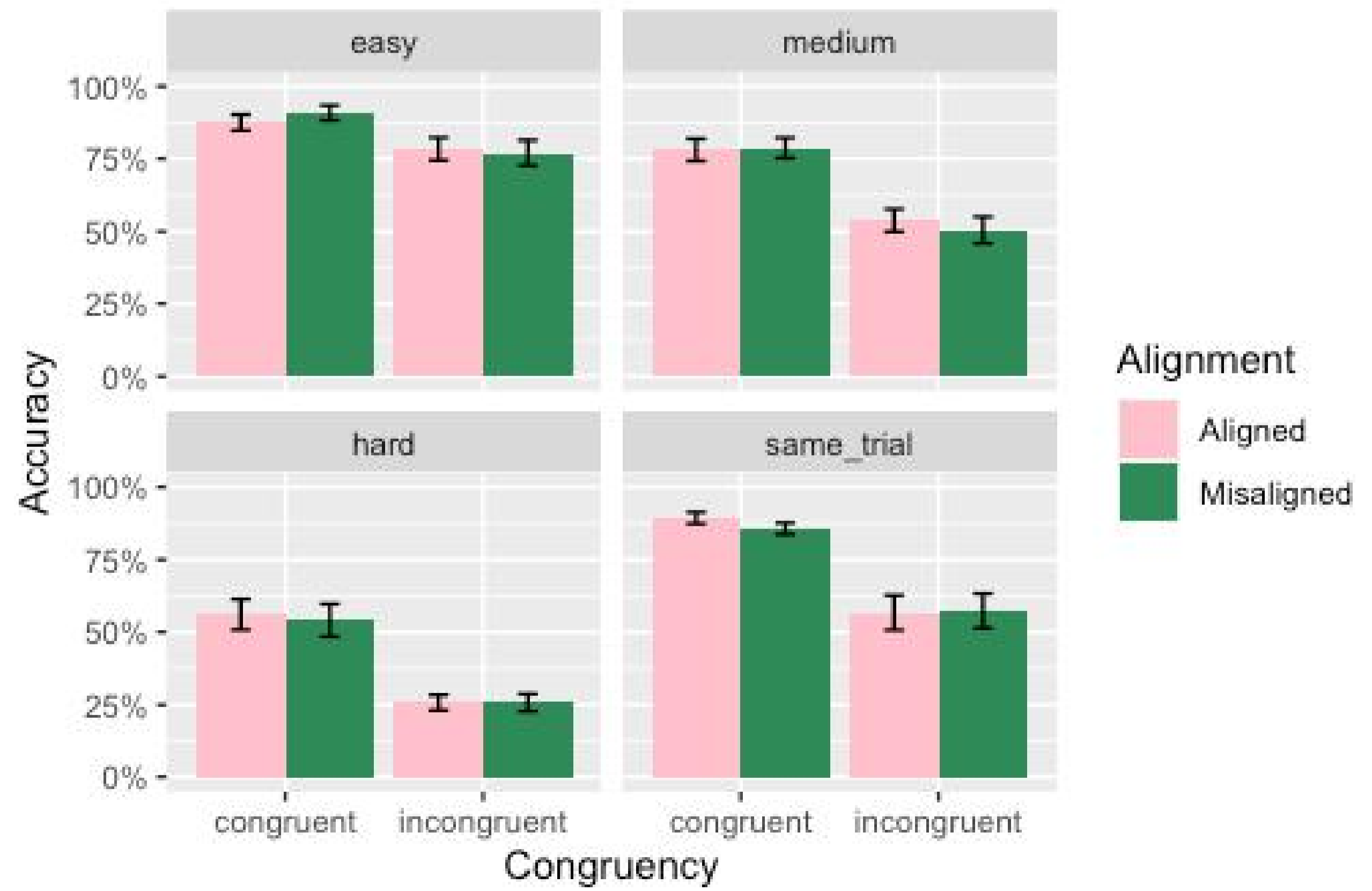


Figure 5. Interaction of congruency and difficulty level on accuracy. The congruency effect was significant for each level of difficulty, with the "easy" level having a weaker significance compared to other difficulties (p<.05). There was no effect seen for alignment (p>.05).

Results

Congruency

A repeated measures ANOVA indicated significant effects for accuracy (p<.001) (Figure 3).

Alignment

A repeated measures ANOVA did not indicate significant effects for accuracy or reaction times (p>.05) (Figure 5).

Difficulty (Morph Levels)

A repeated measures ANOVA indicated significant effects for accuracy (p<.001) (Figure 4).

Congruency x Difficulty Interaction

Post-Hoc comparisons (Bonferroni holm) indicated that the congruency effect was significant for each difficulty level (p<.001) (Figure 5).

Discussion

Hypothesis 1: Congruency

- There was a significant difference in the means of morph levels in congruent conditions compared to incongruent conditions, corroborating previous research [1].

Hypothesis 2: Alignment

- Contrasting existing research on the face composite effect ([2]; [3]), no effect in whole body aligned and misaligned trials was detected.
- Does support findings of a previous study which similarly did not detect a difference in accuracy scores in whole persons.
 - Overall, body effect was analytic.

Hypothesis 3: Morph Levels

- Unique presentation of the "same-different" task, utilizing five levels of face morphs and investigating responses in same-difference face identification. Findings indicated significant mean differences in both reaction times and accuracy.
 - **A possible explanation:** when there is a lack of face information, individuals may more readily rely on the body for informational cues [3].

Future directions: revisit the face-body composite paradigm through studying how same-difference judgments of the body are influenced by the face, introducing a possible face effect.

References

[1] Duthoo, W., Abrahamse, E. L., Braem, S., Boehler, C. N., & Notebaert, W. (2014). The heterogeneous world of congruency sequence effects: An update. *Frontiers in Psychology*, 5. <https://doi.org/10.3389/fpsyg.2014.01001>

[2] Bauser, D. A. S., Suchan, B., & Daum, I. (2011). Differences between perception of human faces and body shapes: Evidence from the composite illusion. *Vision Research*, 51(1), 195–202. <https://doi.org/10.1016/j.visres.2010.11.007>

[3] Hu, Y., Baragchizadeh, A., & O'Toole, A. J. (2020). Integrating faces and bodies: Psychological and neural perspectives on whole person perception. *Neuroscience & Biobehavioral Reviews*, 112, 472–486. <https://doi.org/10.1016/j.neubiorev.2020.02.021>

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