



## INTRODUCTION

People are adept at recognizing biological motion portrayed by a handful of dots (Johansson, 1973). Visual processing of biological motion is influenced by accompanying information from different sensory modalities (Arrighi et al., 2009; Saygin et al., 2008; Thomas & Shiffrar, 2010) or neighboring biological motion (Ikeda et al., 2013; Thornton et al., 2004).

## RESEARCH QUESTION

In this study, we investigated the interaction between audio-visual information and surrounding biological motion by manipulating 1) the temporal synchrony between visual and auditory information of the biological walkers and 2) the congruency of gait direction between target and flanker walkers.

## METHODS

### PARTICIPANTS

24 (13 female, 11 male)

### STIMULI

Point-light walker (4° x 2°)

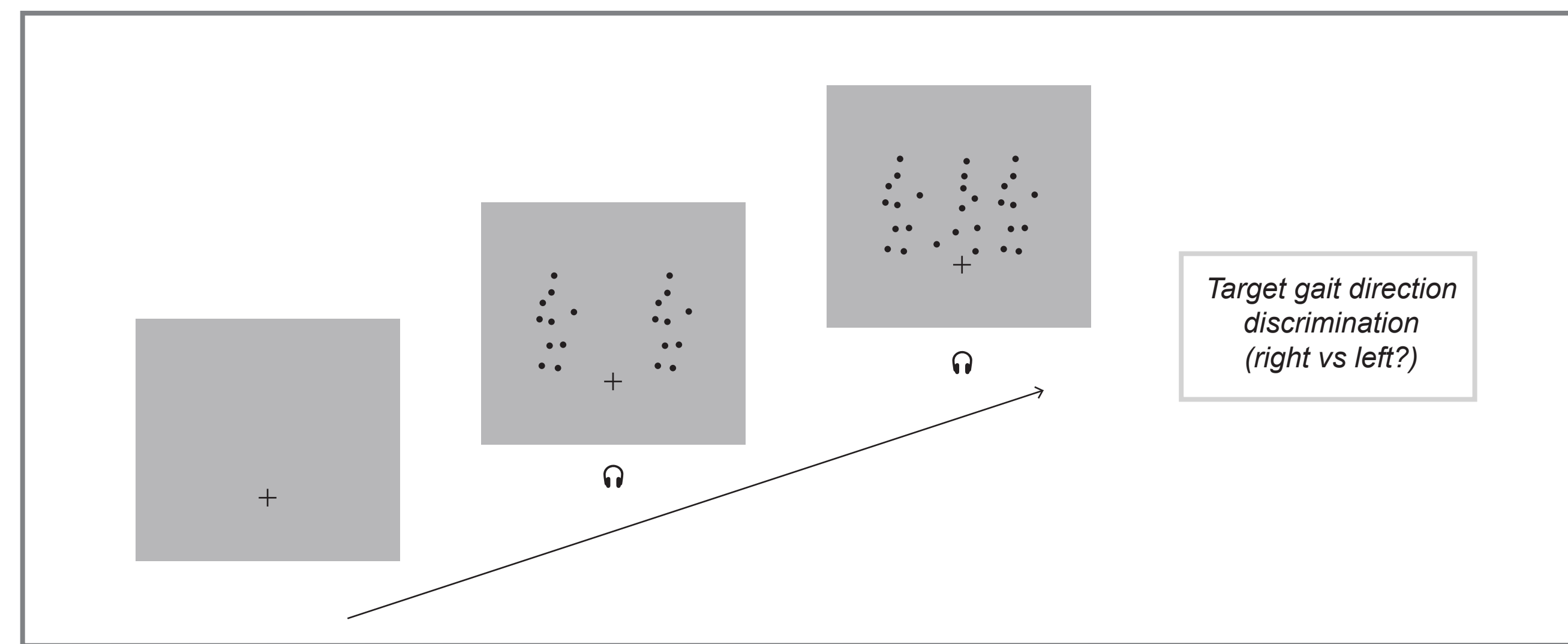
### TASK

2-AFC gait direction discrimination of target (right vs left)

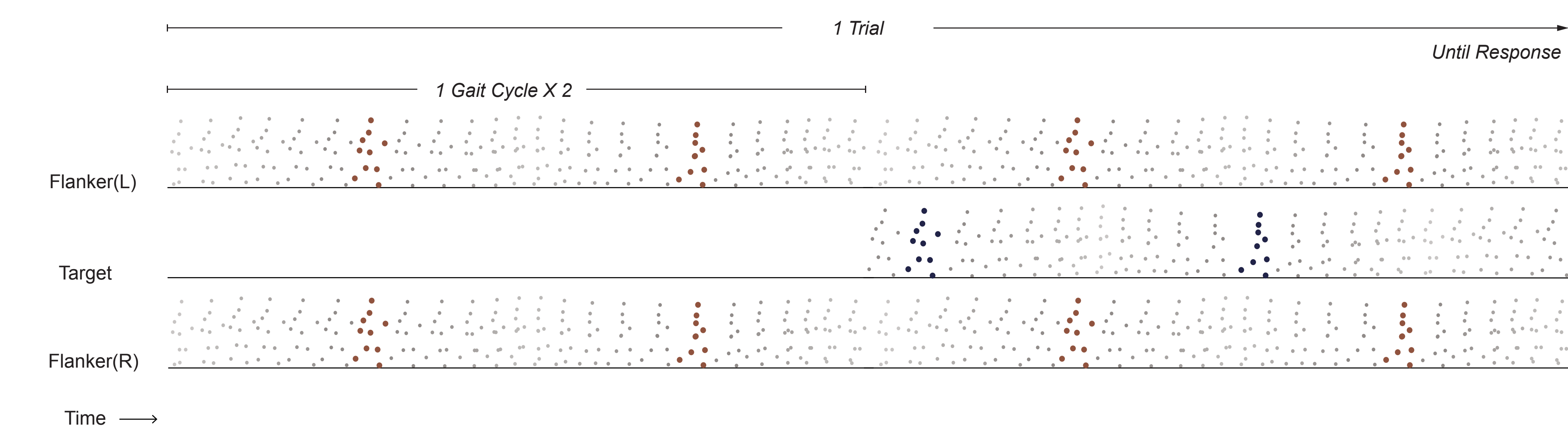
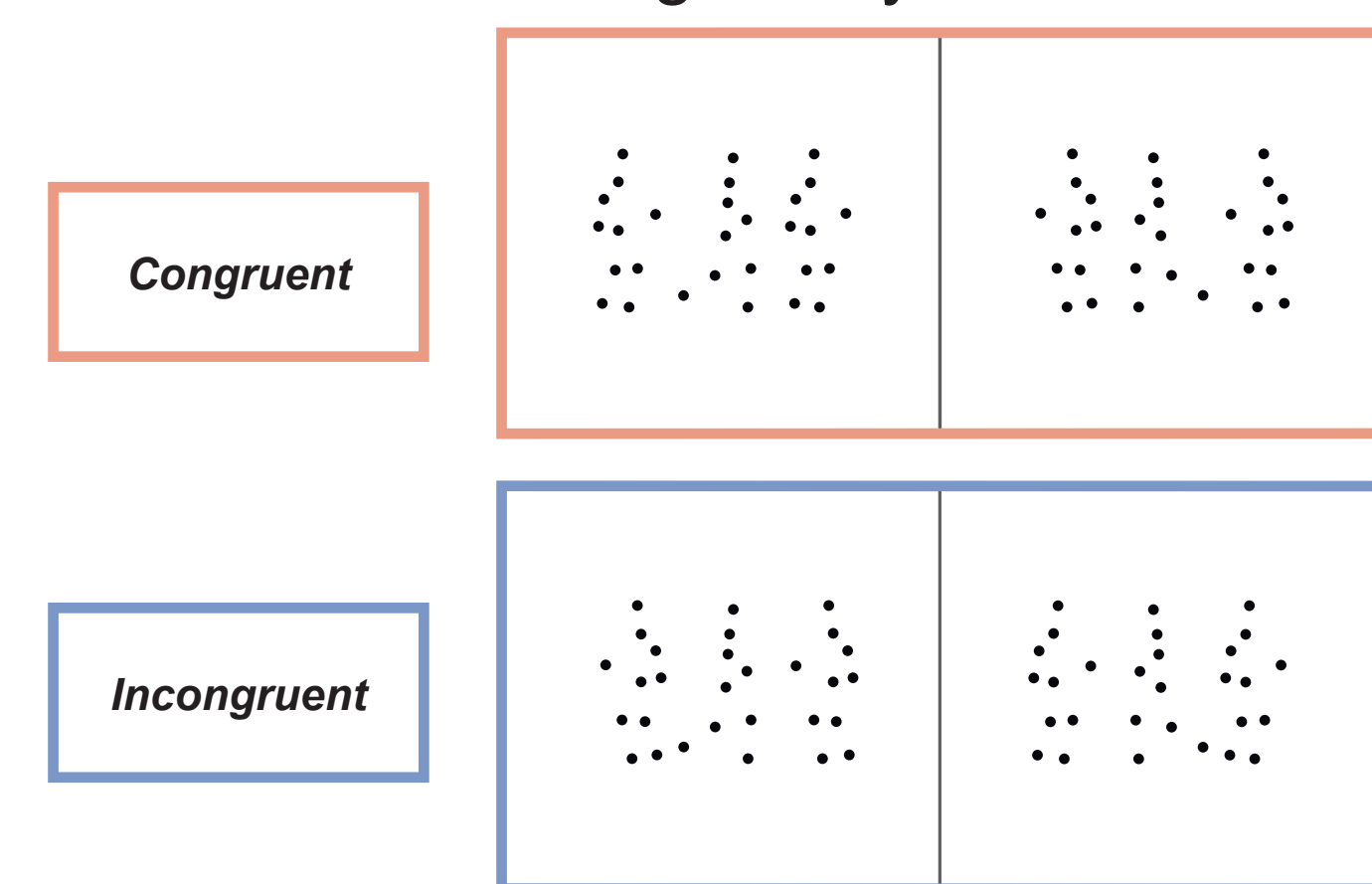
### CONDITIONS

Gait Direction Congruency Condition, Audio-Visual Condition

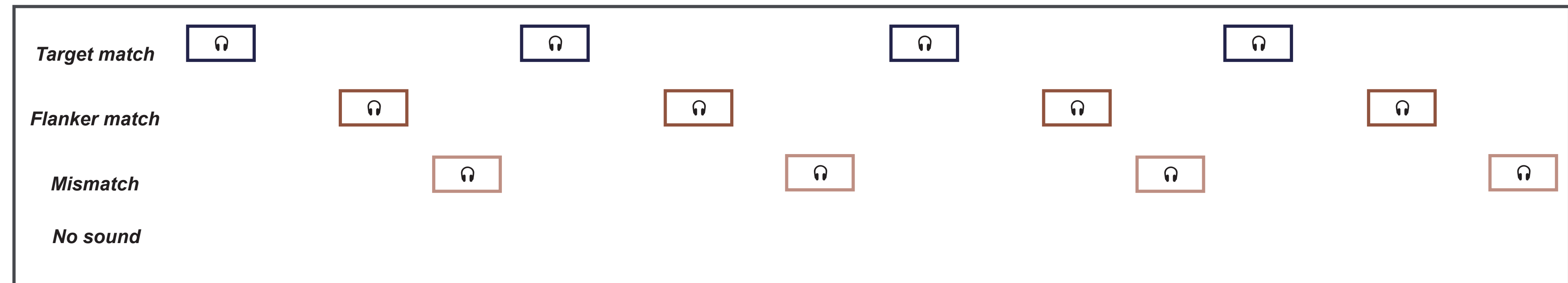
#### Trial Structure



#### Gait Direction Congruency Conditions

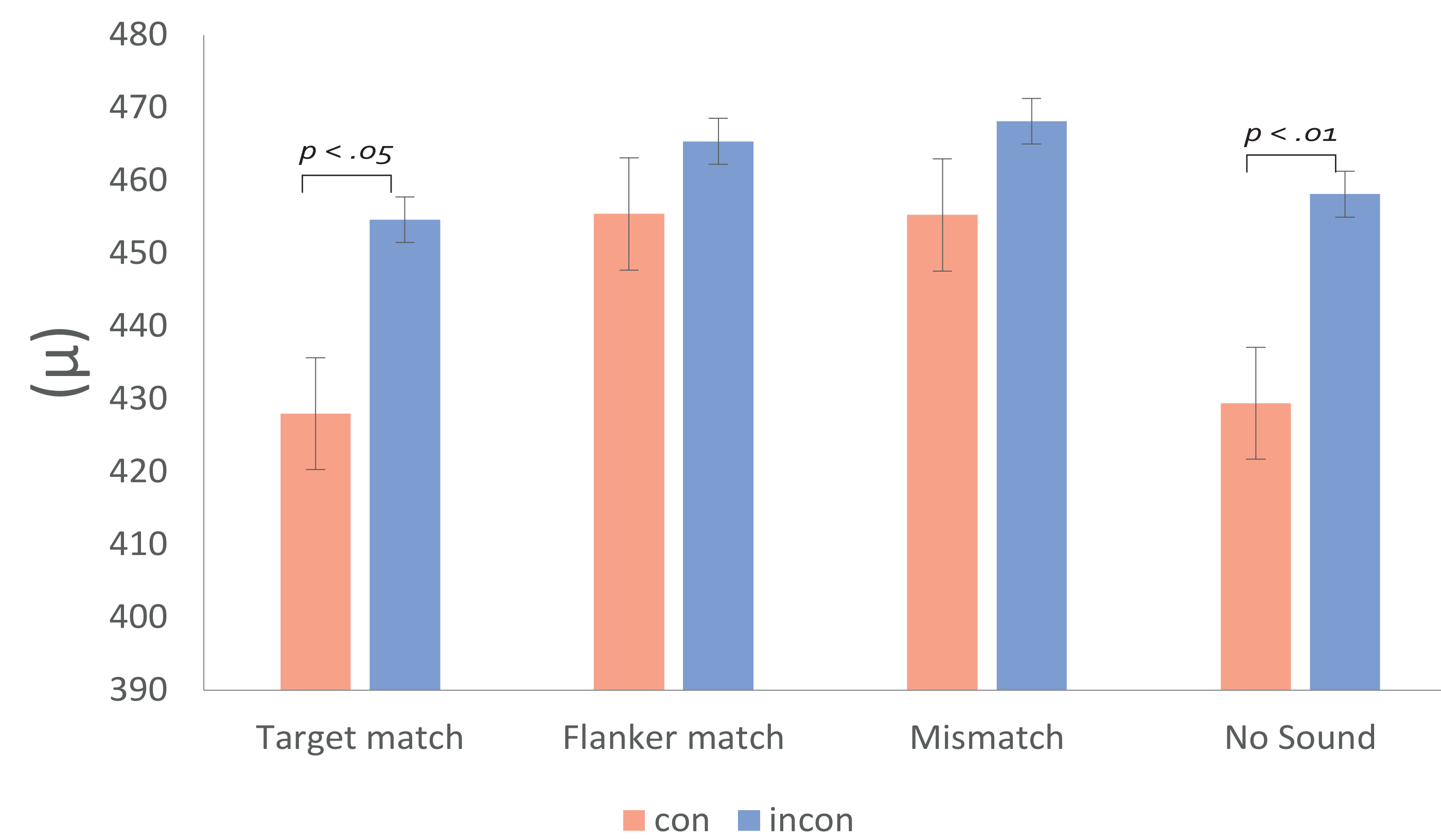


#### Audio-Visual Conditions



## RESULTS

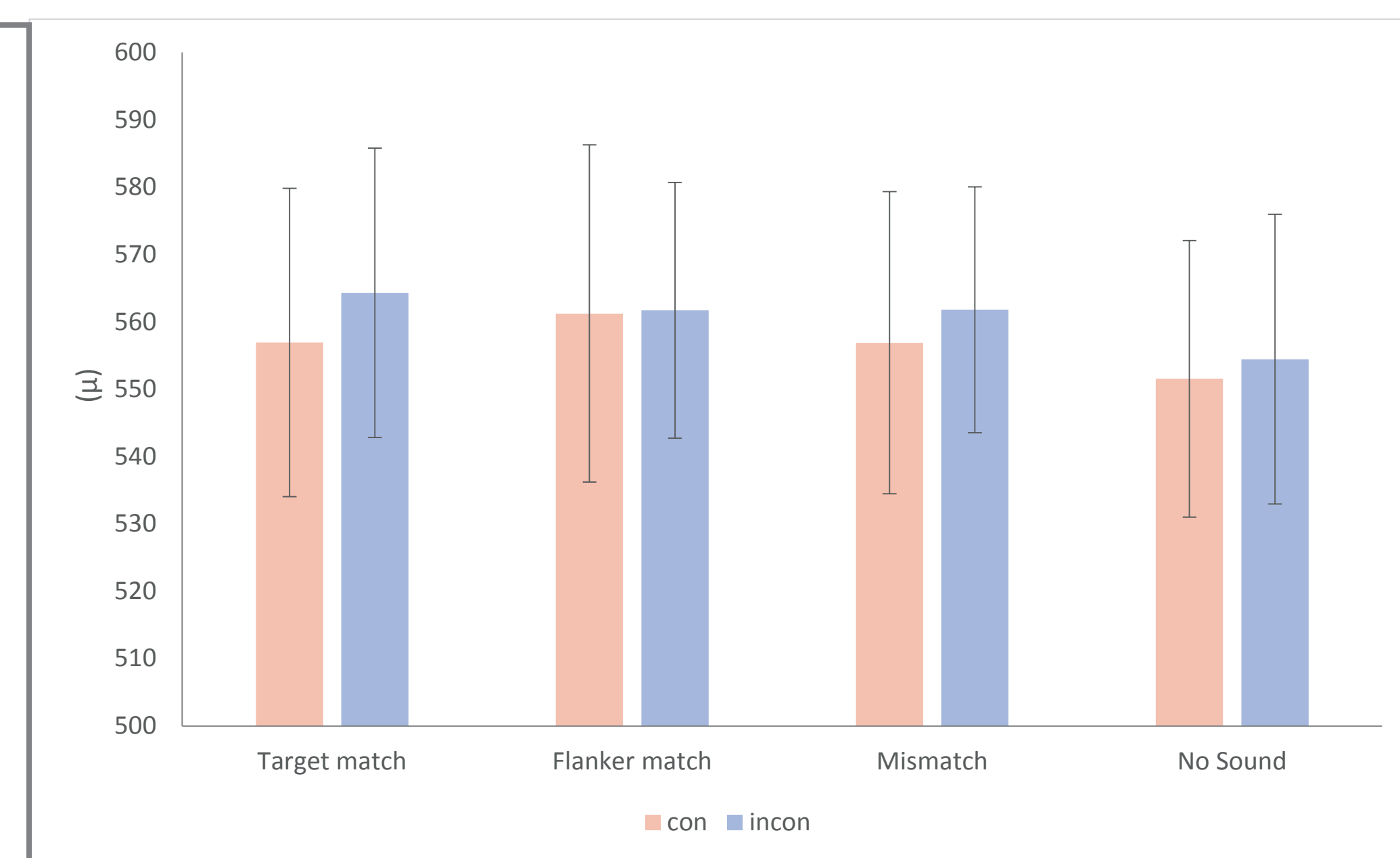
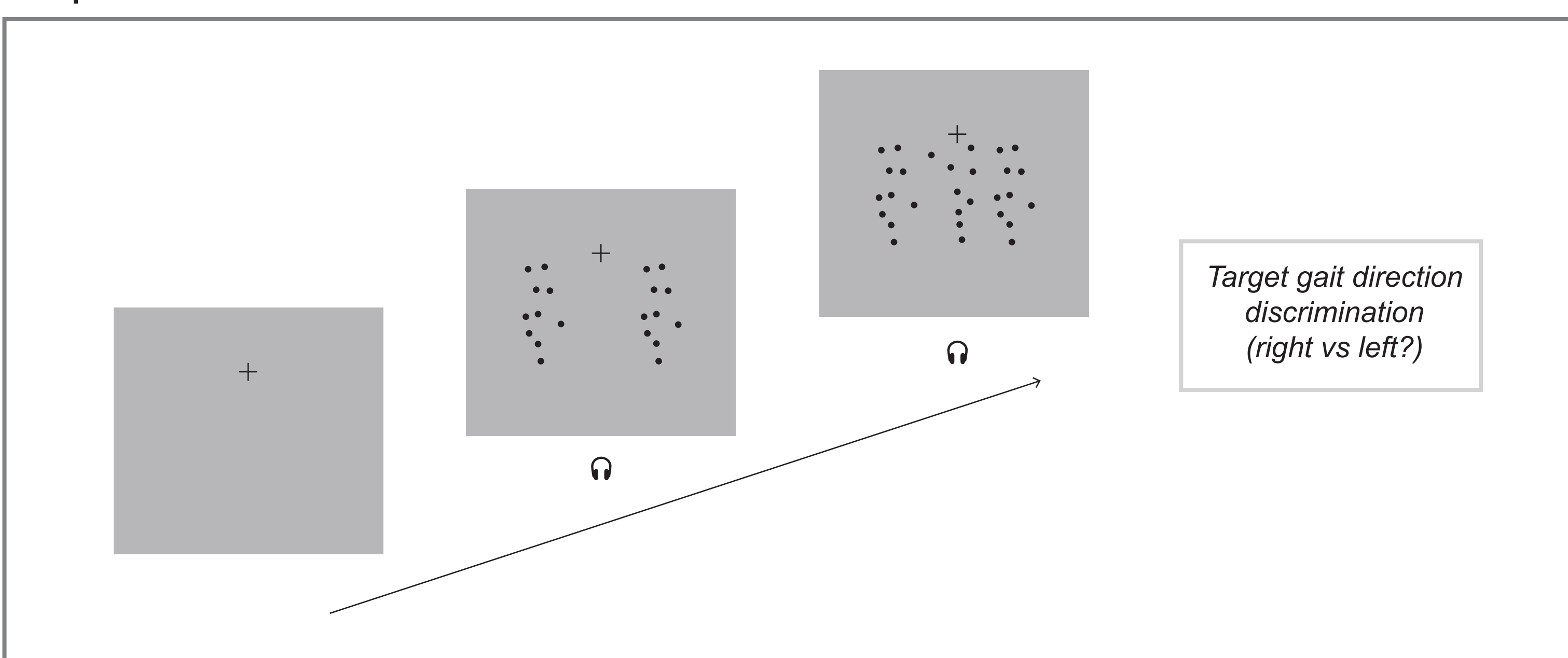
### ex-Gaussian fitted Data



Pairwise comparisons revealed significant effects of congruency only when the audio timing matched the target gait or was not presented, but not in the other two conditions.

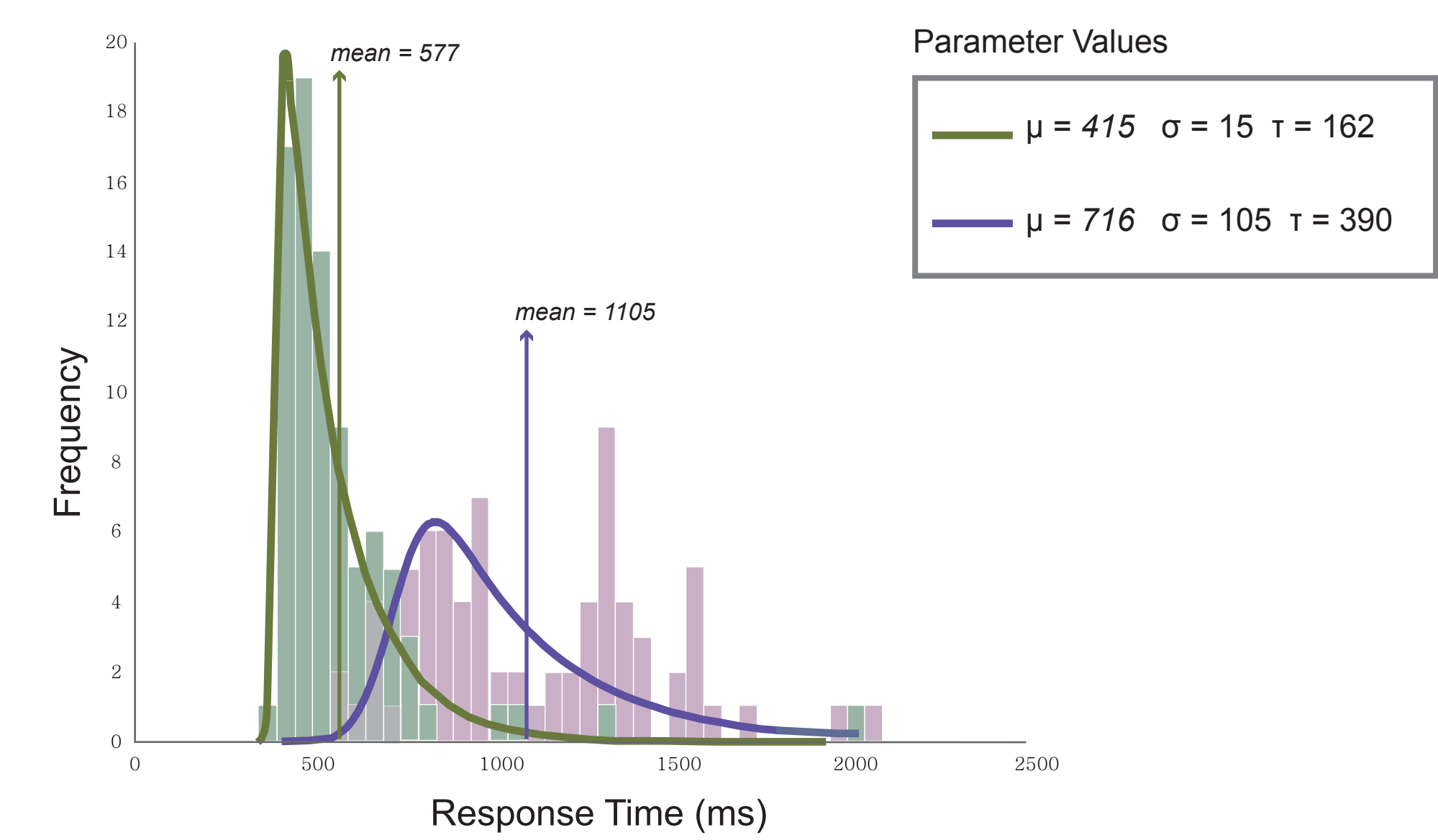
### No effect from inverse point light walkers

#### Experiment 2: Trial Structure



There was no flanker interference effect in the “no sound” condition between the two congruency conditions.

#### RT distributions from two participants



## CONCLUSION

These results suggest bimodal temporal integration directs attention to temporal dynamics of biological motion, mitigating the interference of spatially proximal neighboring motion.

#### REFERENCES

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#### ACKNOWLEDGEMENT

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