

## Introduction

- NCCs: the minimal set of neuronal events that are jointly sufficient for consciousness
- Our goal is to identify generalized NCCs that consistently appear regardless of the particular experimental manipulation of conscious perception.
- We used three different manipulations in a no-report paradigm to find generalized NCCs [4]:

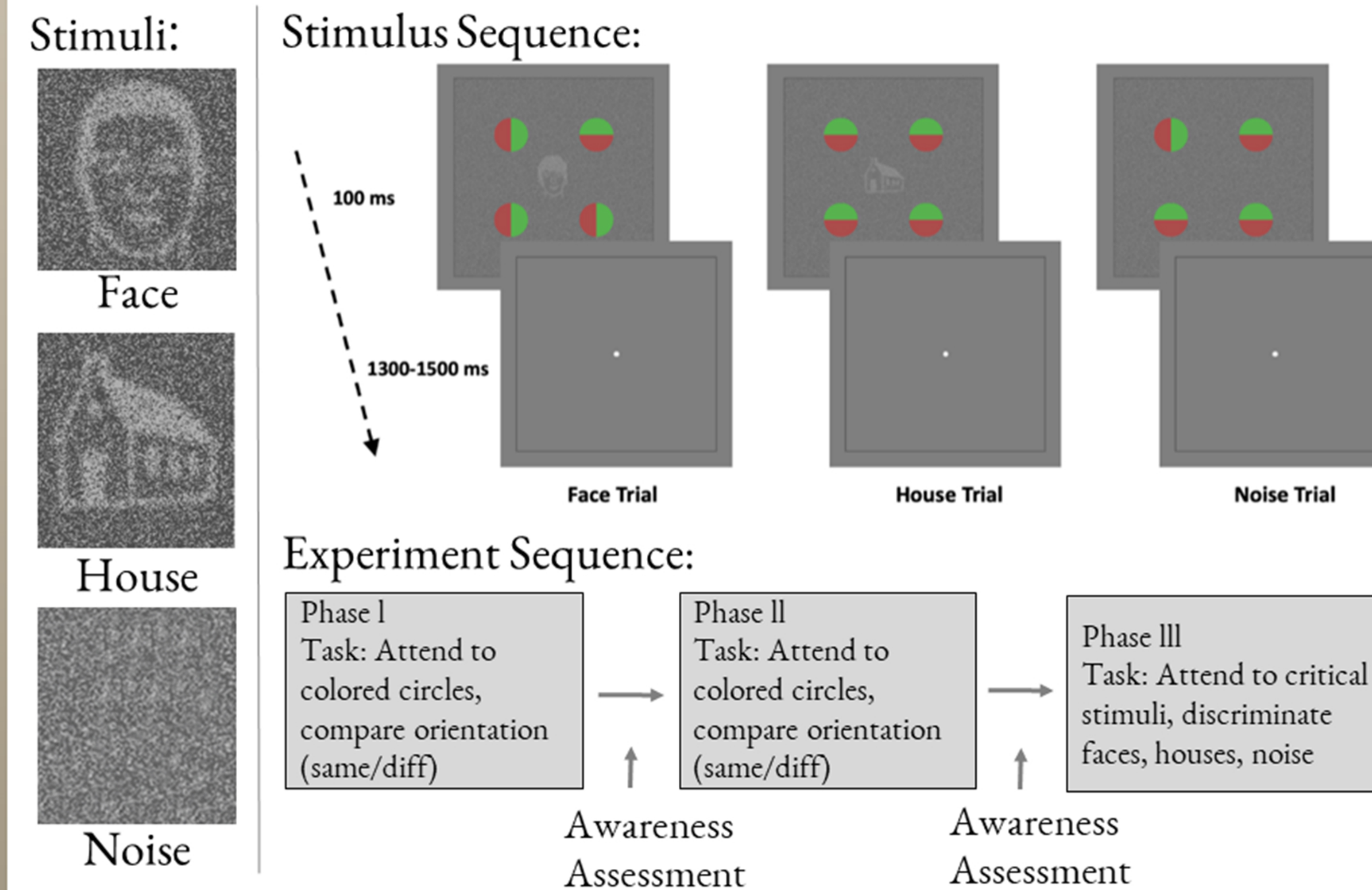
### I. Inattentional Blindness [1]

### II. Backwards Masking [2]

### III. Dichoptic Color Fusion (see other poster) [3,4]

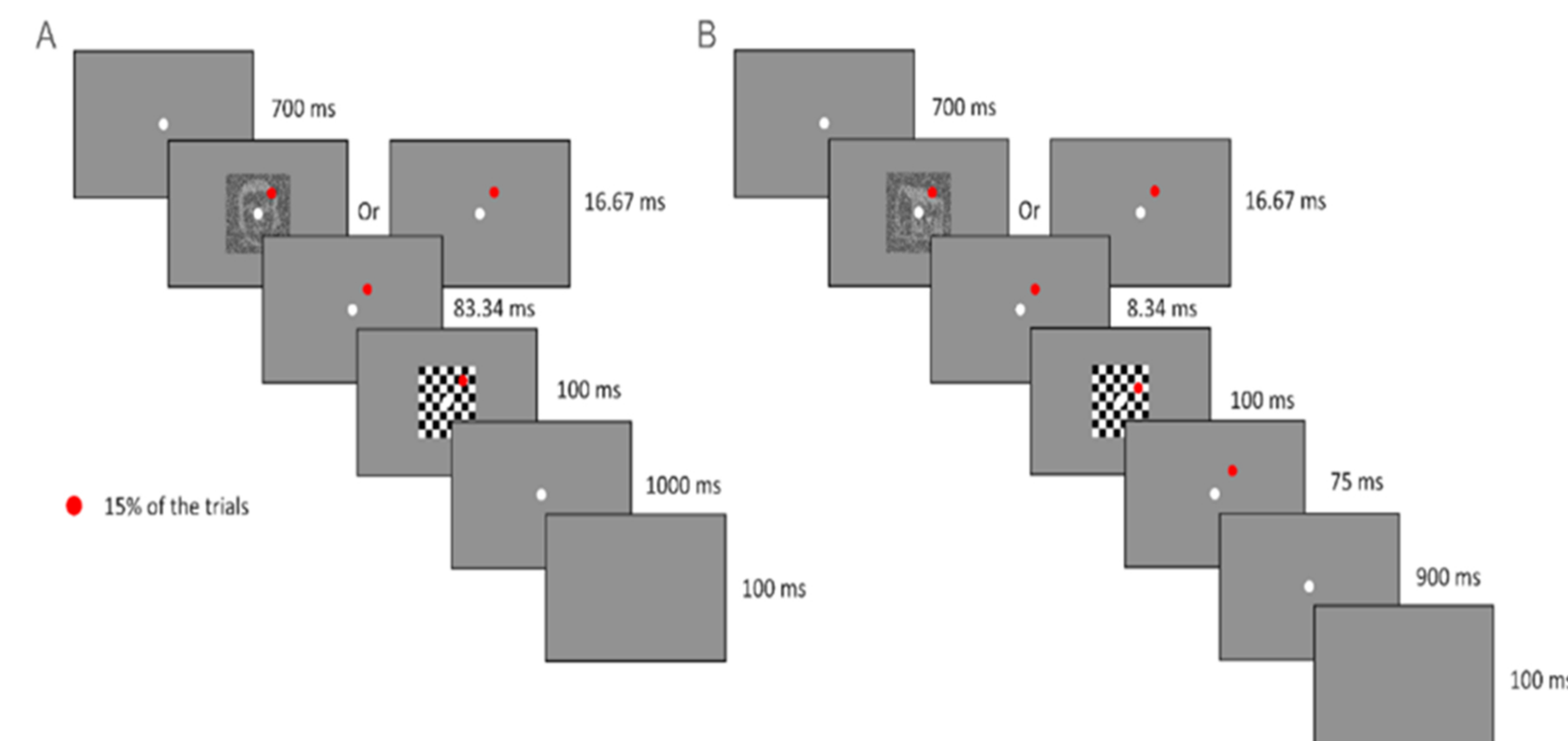
**Objective:** Identify NCCs in the same subjects, using the same stimulus set, but with three very different manipulations of visual awareness, and compare EEG signals elicited by visible vs. invisible stimuli across the three experiments → *triangulation!*

## I. Methods: Inattentional Blindness

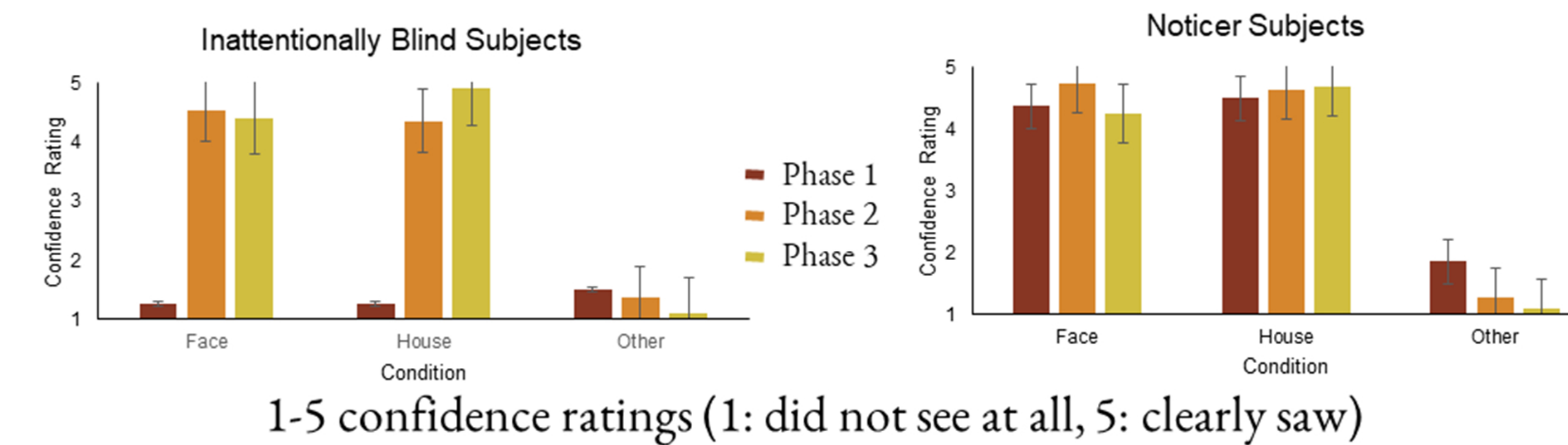


## II. Methods: Backwards Masking

Subjects (N=25) completed 2 experimental tasks: no report (see below) and 2AFC + PAS ratings (1-4)

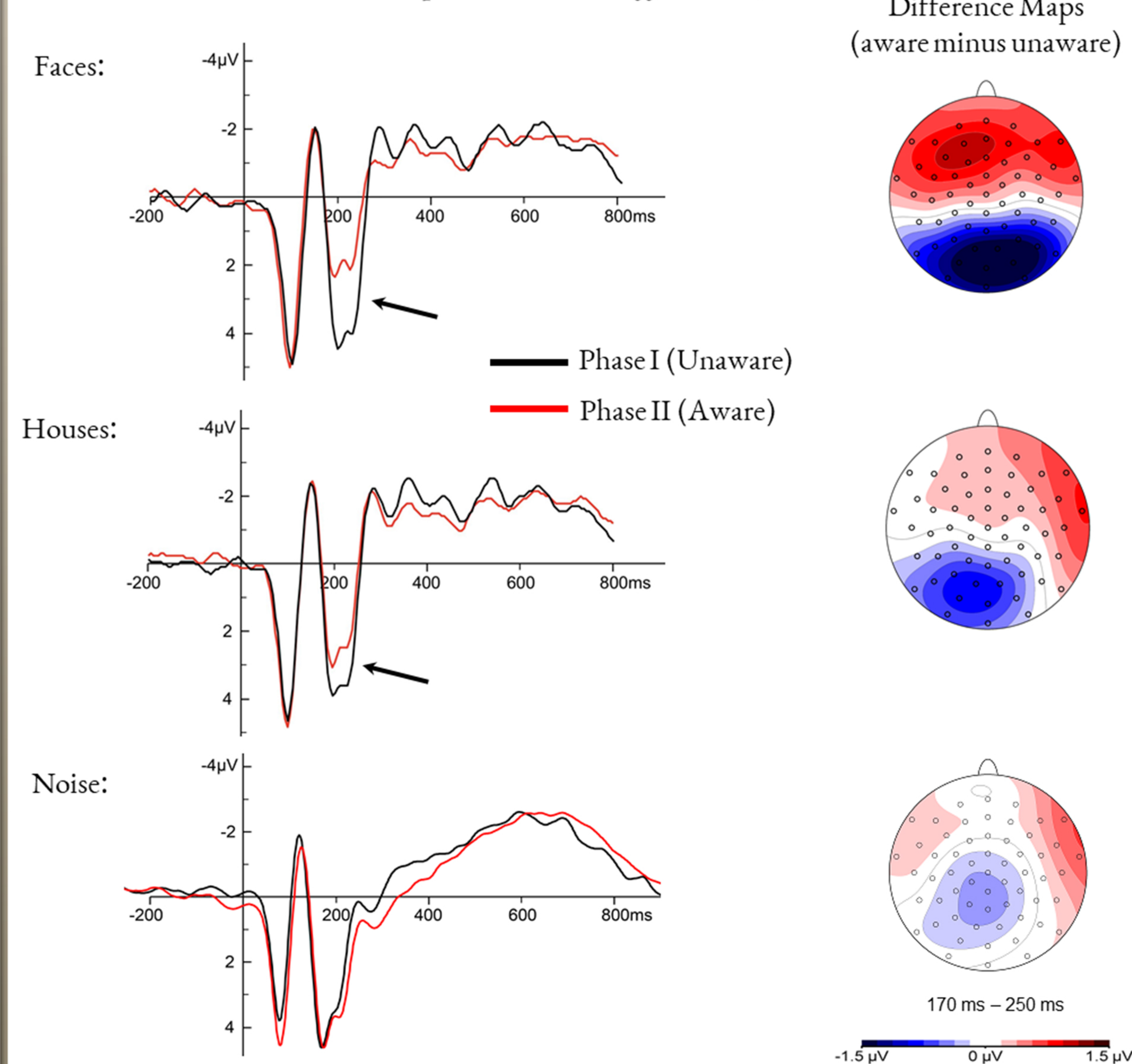


## I. Inattentional Blindness Awareness Assessment

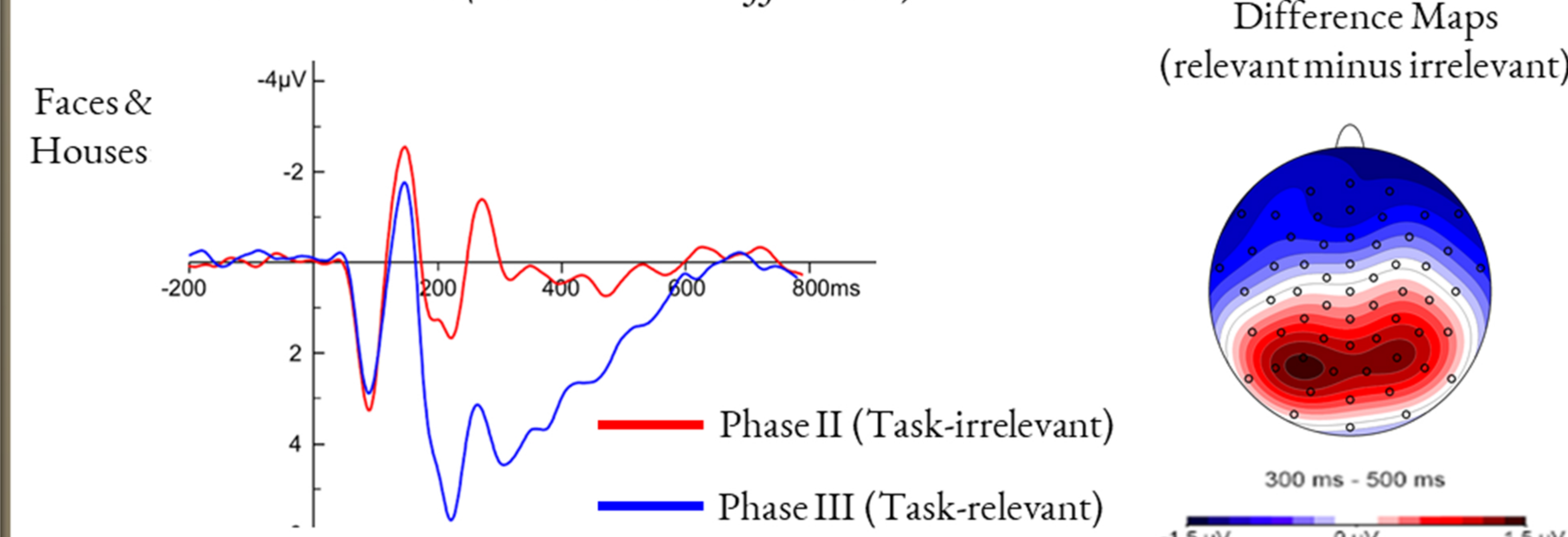


## Preliminary EEG Results

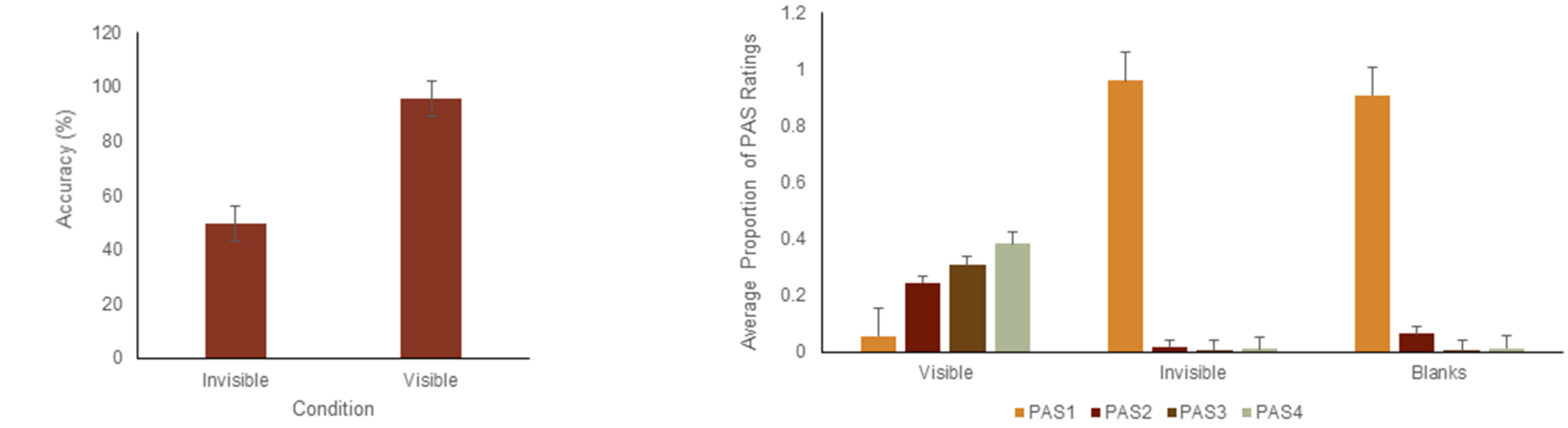
### Inattentional Blindness (*Perception-related differences*)



### Inattentional Blindness (*Task-related differences*)



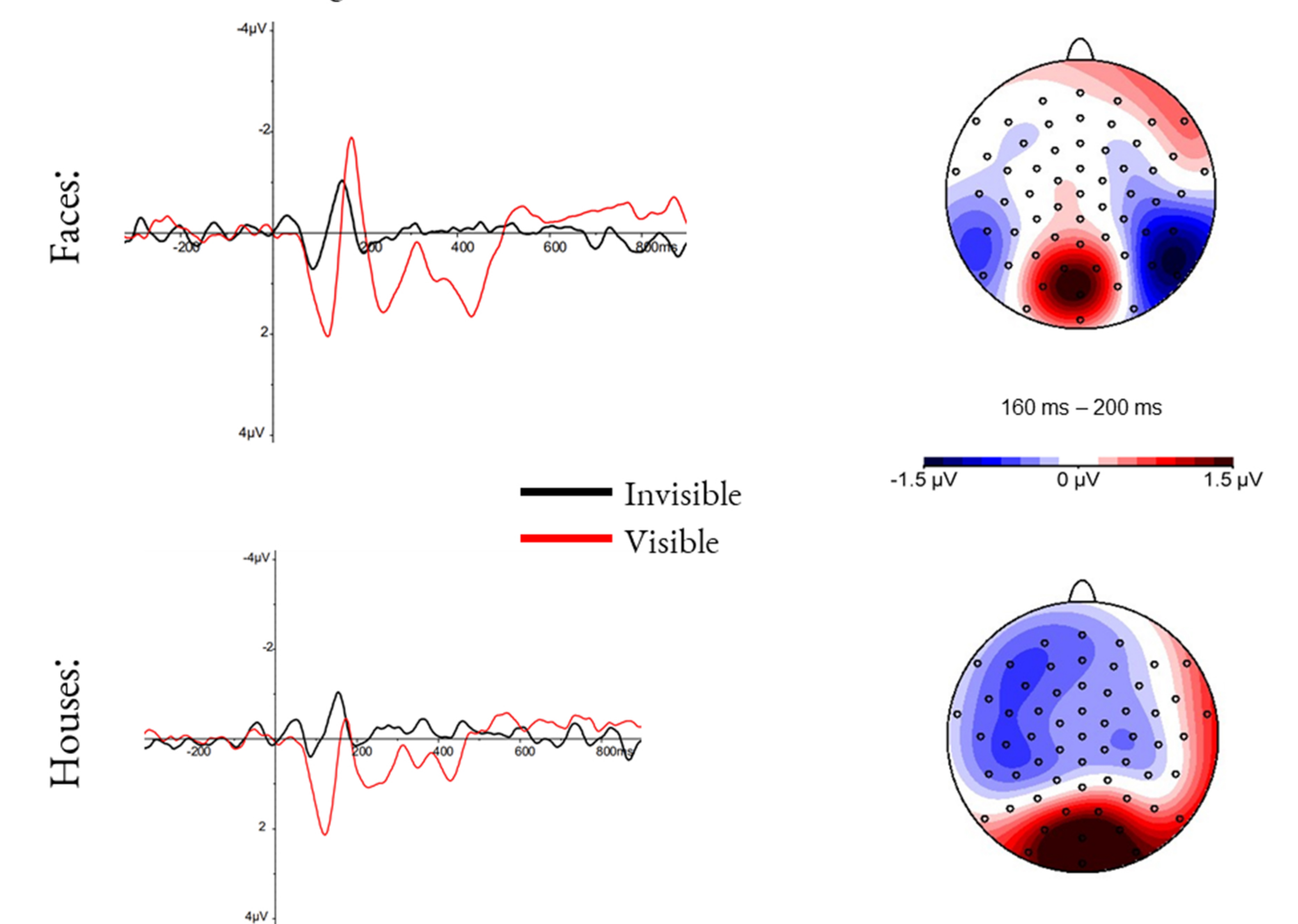
## II. Masking 2AFC & PAS Results



PAS ratings (1-4) in a behavioral control/validation condition

## Preliminary EEG Results

### Backwards Masking



## Discussion

- Ongoing “triangulation analyses” are aimed at assessing the generalizability/overlap of these NCCs.
- So far, all three experiments appear to show posterior negative-going ERP differences between visible/invisible stimuli, from ~150-250ms, with some variations.
- Spatio-temporal contrast/conjunction maps in the time domain and frequency domain are planned.
- Across-experiment multivariate pattern classification will also be exploited.

## References

1. Mack A. & Rock I. (1998). *Inattentional Blindness*. Cambridge, MA: MIT Press.
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4. Schurger, A., Sarigiannidis, I., Naccache, L., Sitt, J. D., & Dehaene, S. (2015). Cortical activity is more stable when sensory stimuli are consciously perceived. *Proceedings of the National Academy of Sciences*, 112(16).
5. Dembski, C., Koch, C., & Pitts, M. (2021). Perceptual awareness negativity: A physiological correlate of sensory consciousness. *Trends in Cognitive Sciences*, 25(8), 660–670.

## Acknowledgments

This study was supported in part by the “Galakatos science Research Fund,” NSF REU, and Templeton World Charity Foundation (grant #: TWCF-2022-30266)