

# Where to Catch a Lie

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## Background

- Social Awareness- mental events in which one forms a mental representation of either oneself or another person (Sheldon, 1996).
- Micro-expressions- brief facial expressions which appear when people try to conceal their genuine emotions, especially in high-stake situations (Yan et al., 2013).
- Nonverbal Leakage – ‘clues’ that are expressed non-verbally, suggesting information is being concealed or withheld by the message sender (Ekman, 2003).
- Deception detection experts- people who are naturally adept, who have undergone extensive training, or who are professionally experienced at recognizing and interpreting behavioral signals of deception (Levine et al., 2014).
- *Present Study:* This study in-progress explores the relationship between social awareness, deception detection, and eye movement patterns exhibited during deception detection.

## Hypotheses

- Hypothesis 1: Social awareness will predict deception detection capabilities
- Hypothesis 2: The relationship between social awareness and deception detection will be mediated by conscious or unaware attention to areas associated with nonverbal ‘leakages’ of deception



## Methods

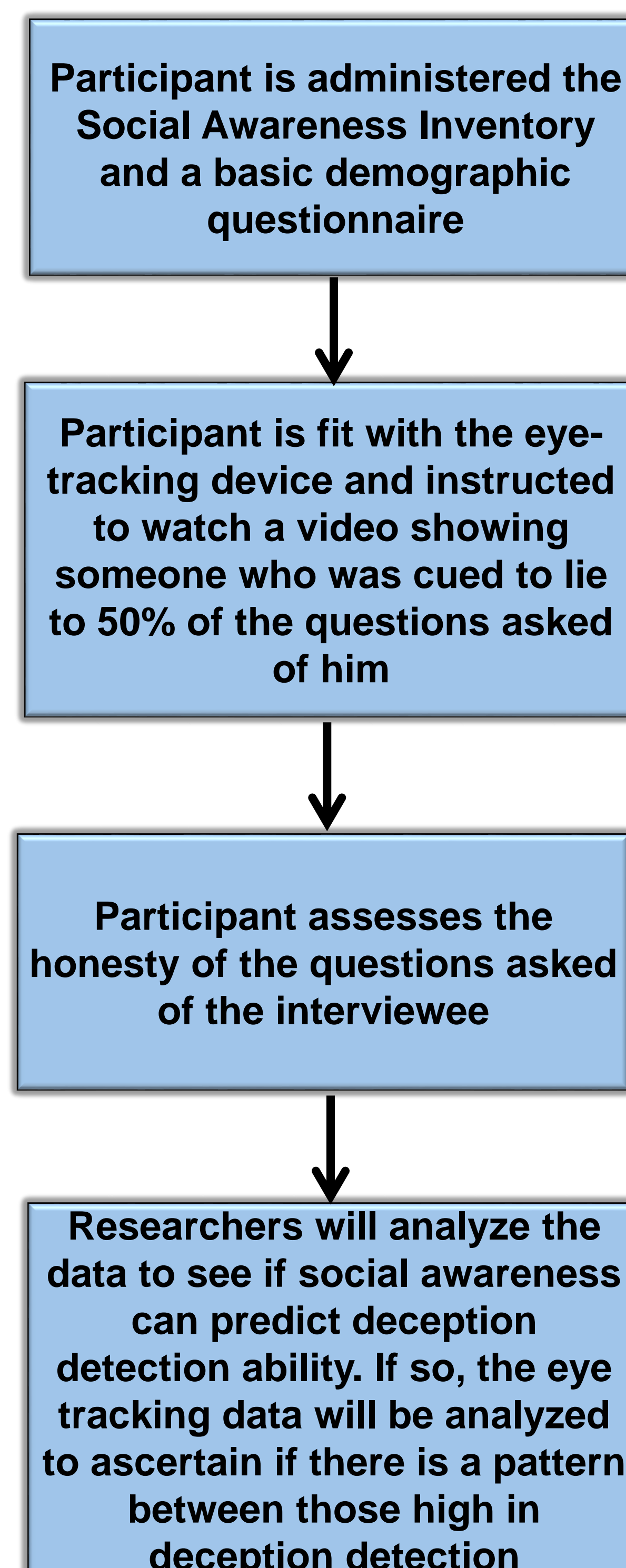
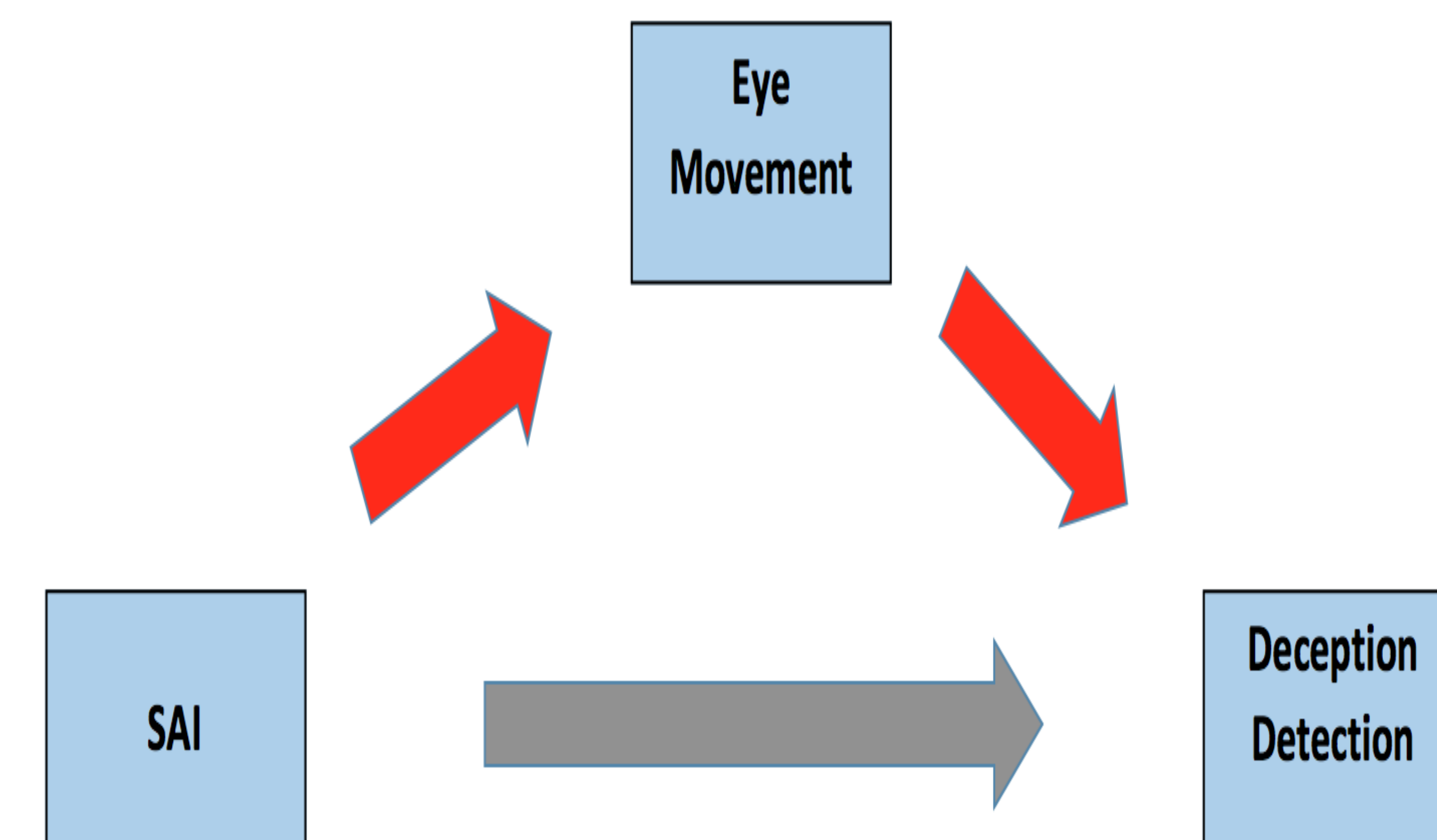


Figure 4. EyeLink II Eye-Tracker



## Deception Detection Mediation Model



## References

- Ekman, P. (2003). *Emotions revealed* (1st ed.). New York: Times Books.
- Levine, T., Clare, D., Blair, J., McCornack, S., Morrison, K., & Park, H. (2014). Expertise in deception detection involves actively prompting diagnostic information rather than passive behavioral observation. *Human Communication Research*, 40, 442-462.
- Sheldon, K. (1996). The Social Awareness Inventory: Development and applications. *Personality And Social Psychology Bulletin*, 22, 620-634.
- Yan, W. J., Wu, Q., Liu, Y. J., Wang, S. J., & Fu, X. (2013). CASME database: A dataset of spontaneous micro-expressions collected from neutralized faces. *10th IEEE International Conference and Workshops on Automatic Face and Gesture Recognition (FG 2013)*, pp. 1-7: IEEE.