Project title: Masked perpetrators: testing the effectiveness of alternative identification procedures

Project leader: Dr. Anna Sagana

Function: Assistant Professor

Collaborators: Dr. Melanie Sauerland

Proposal (250 words):

Introduction:
The use of disguise poses a problem for eyewitness identification and police officers matching identities from closed-circuit television (CCTV) to real persons or photos. That is because disguise restricts the facial features that can be encoded. In settings such as border control or crime investigation, where successful person identification is a matter of national security, unsuccessful identifications and matching mean that an innocent suspect is put to a costly trial for the state while the real perpetrator is free to commit additional offences. Therefore, effectively dealing with masked perpetrators is a pressing issue. In this project, we investigate how we can improve face recognition performance in such cases.

Hypothesis and Objectives:
In this project we examine whether, in the context of disguised perpetrators, identification procedures would benefit from a presentation method depicting only selective facial features (i.e., only those visible during the crime) rather than the customary whole-face pictures. We will examine this question in relation to eyewitness identification procedures and person identifications from CCTV.

Setting and Methods:
Experimental and field studies with and without eye-tracking devices.

Impact:
This will inform project police officers with a clearer and more effective directive regarding the construction of lineups and an optimal matching technique for person identifications from CCTV. Hence, 1) the actual perpetrators would be captured faster, reducing the risk of future crime, 2) fewer innocent suspects would be prosecuted, and 3) as a result of points one and two, public's trust in the effectiveness of police investigations and their feeling of safety would increase.

Requirements candidate: Highly motivated student with good English communication skills and proactive and resolute attitude.

Keywords: face processing, facial features, accuracy, masks, lineups, identification confidence, disguise

Top 5 selected publications:

1. Sagana, A., Sauerland, M., & Merckelbach, H. (2014). "This is the person you selected": Eyewitnesses' blindness for their own facial recognition decisions. *Applied Cognitive Psychology, 28*, 753-764, doi:10.1002/acp.3062

2. Sagana, A., Sauerland, M., & Merckelbach, H. (2013). Witnesses' blindness for their own facial recognition decisions: A field study. *Behavioral Sciences and the Law, 31*, 624-636. doi:10.1002/bsl.2082

3. Sauerland, M., Sagana, A., & Sporer, S. L. (2012). Assessing nonchoosers' eyewitness identification accuracy from photographic showups by using confidence and response times. *Law and Human Behavior, 36,* 394-403. doi:10.1037/h0093926

4. Sauerland, M., Stockmar, A. K., Sporer, S. L., & Broers, N. J. (2013). The reliability of identification evidence with multiple lineups. *The European Journal of Psychology Applied to Legal Context, 5*, 49-71.

5. Sauerland, M., Sagana, A., Siegmann, K., Heiligers, D., Merckelbach, H., & Jenkins, R. (2016). These two are different. Yes, they're the same: Choice blindness for facial identity. *Consciousness and Cognition, 40C*, 93-104. doi:10.1016/j.concog.2016.01.003

Total number of times cited: 63