# The social processing mode: Visual search paradigm

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## Introduction

As per the social processing hypothesis, an attentional bias towards emotional stimuli only occurs if participants are under a social mode. This mode is instigated through the current task and instructions. Wirth and Wentura (2019) used a cueing task to show that angry face cues led to significant cueing scores only in social mode. Thus, establishing a precedence for an emotional attentional bias specifically under the social mode. The aim of these experiment was to generalize these findings to the additional singleton paradigm.

# The experiments' designs

- **Experiment 1** Social task (within participants)
- **Experiment 2** Social vs. Asocial (between participants)



# Experiment 1

- Experiment 1 is a lab experiment
- It is a conceptual replication of the unknown condition of Glickman and Lamy (2018):
  - Unknown condition: when a specific feature for finding the target
     is unknown significant singleton effect
  - Known condition: When the specific feature for finding the target is known – not significant
- Unknown condition: conceptually similar to the social condition
- Design:

In half the trials the singleton is present and in the other half it is absent

- We expected target search times to be effected by the presence of the singleton.
- N = 34, Mean age = 22.12, 19 females

- Experiment 2 was an online experiment conducted on prolific
- The aim for this experiment was two-fold:
  - To find a significant singleton effect for the social condition (replication of lab experiment)



### **Discussion: Experiment 1**

- Successful conceptual replication of Glickman and Lamy (2018), unknown condition
- Replication of the social task as per the social processing hypothesis (Wirth & Wentura, 2019; 2020)
  Emotional faces led to a singleton effect despite being task-irrelevant
  Employment of serial search as opposed to parallel search (Treisman & Gelade, 1980):
  Faces represent a complex stimuli
  Unlike color singleton effects emotional faces might not display a pop out effect; configural processing vs featural processing (Ohman et al., 2001)
  In experiment 2 we can compare the social singleton effect with the asocial singleton

- To find a null singleton effect for the asocial condition
- Design: 2 (singleton: singleton absent, angry singleton) × 2 (task type: social or asocial) design, with the former factor manipulated within participants and the later factor being a between participant manipulation.
- Social group N = 131, Asocial group N = 120, Mean age: 27.68, 11 female, 7 diverse

#### Discussion: Experiment 2

- We were able to find a replication effect of the social task online
- Unexpectedly the effect extended to the asocial condition
  - A clear overall singleton effect:  $BF_{+0}$  of 17.62
  - A clear null effect for the difference between social vs. asocial BF<sub>0+</sub> of 5.72
- The social processing mode does not extend itself to the additional singleton paradigm
- Emotional singleton leads to an inefficient search, regardless of mode of data collection: online vs. offline

#### **Discussion & Conclusion**

- Why does the social processing hypothesis not extend itself to the additional singleton paradigm?
- Fundamental differences between dot probe and additional singleton paradigms:
  - Real faces used as cues, brief presentation times
  - Schematic faces used as targets, presented until response
  - It takes longer to detect real faces as compared to schematic faces (Horstmann & Bauland, 2006)
  - Meaningful vs meaningless targets (Wirth & Wentura, 2019)

#### References

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