

# When do faces capture attention? Evidence from eye movements



## About Faces:

- Detected very fast by the brain (~100 ms).
- Detected and attended more than other objects.
- Their semantic processing is less sensitive to attentional load.

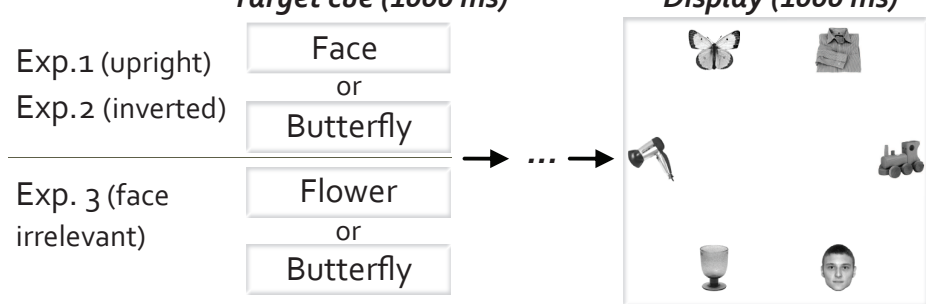
## Langton et al. (2008) Cognition

- In a visual search task, upright (but not inverted) distractor faces disrupt the search for a butterfly (manual responses).
- Butterfly distractors do not interfere with a face search.
- Faces capture attention.

## We have a preference for faces but...

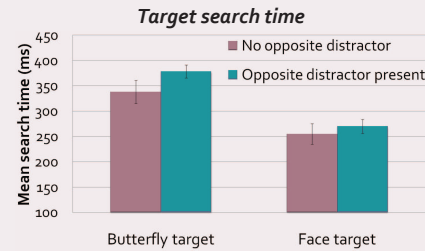
- Do they capture the eyes automatically?
  - Do they retain the eyes once they are fixated?
- ... Eye tracking!

## Method

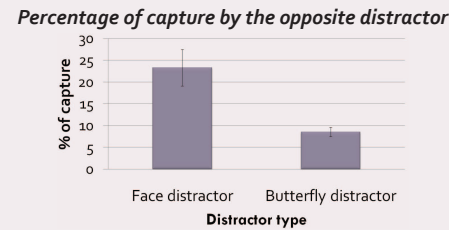


- Task: find the cued target with the eyes.

## Experiment 1 - Upright displays (N=8).

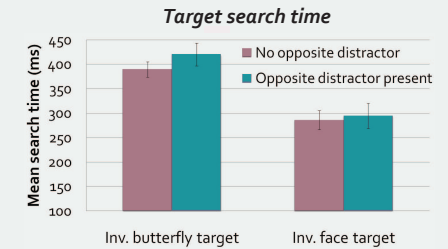


- **Faces found faster** than butterflies.
- The presence of the opposite distractor is disruptive but even more when it is a face.
- Same pattern with number of saccades (all <2).

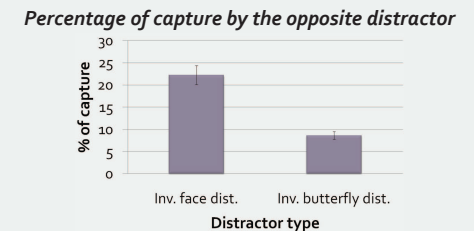


- **Faces capture the eyes more than butterflies.**
- No effect on fixation duration.

## Experiment 2 - Inverted displays (N=8).

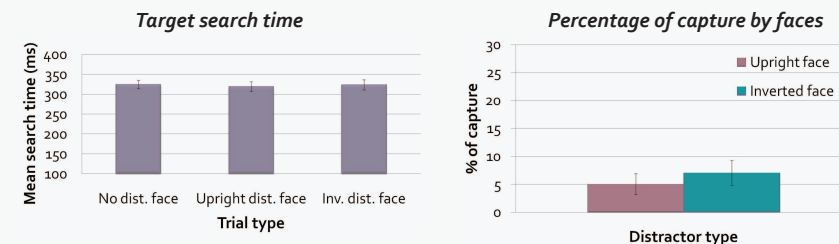


- **Inverted faces also found faster.**
- The presence of a distractor inverted face is disruptive for the inverted butterfly search.



- **Inverted faces also capture the eyes more.**
- No effect on fixation duration.

## Experiment 3 - Irrelevant faces (N=8).



- The presence of an **irrelevant upright or inverted face does not affect the search** for flowers and butterflies.
- Same pattern with number of saccades.

- Distractor faces do not capture the eyes.
- **When task-irrelevant, faces can be ignored.**

## Conclusion

Upright and inverted faces are easy to detect. Faces have highly salient features but they only capture the eyes when their detection is relevant during the task.