

Attention to self-referential stimuli: Can I stop looking at myself?

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Background

- One's own name has been described as particularly prone to attract attention (Moray, 1959; Wolford & Morrison, 1980)
- This effect is temporary and only appears when enough resources are available (Harris & Pashler, 2004)
- This effect is dependent upon the presentation of the task-irrelevant stimulus within the focus of attention (Gronau et al., 2003)

Questions under investigation

What about one's own face?

- Does it also produce distraction and is this distraction temporary?
 - Is this distraction stronger than that produced by another highly familiar face?
 - Is distraction dependent on the location and task demands?
- Adaptation of the paradigm used by Harris & Pashler (2004)

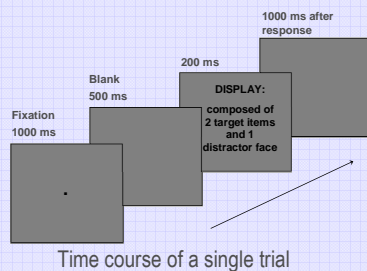
Participants

- Recruited by gender-matched pairs
- Each one is the control of the other

Stimuli

- Target items = 0.5 by 0.7°, spaced 4° apart
- Faces = 3.3 by 4.1°

Procedure



General method

- 2 blocks of 48 trials each:

Block 1: 46 unfamiliar distractor faces (DFs)

But familiar DF on trials 29 and 39
(self – classmate or classmate – self)

Block 2: 24 unfamiliar and 24 familiar (12 self and 12 classmate) DFs in random order

Variables

D.V.: Mean RTs on primary task

I.V. **Block 1:**

- Trial type (20-28, 29, 30-38, 39, 40-48)
- Order (self-classmate, classmate-self)

I.V. **Block 2:**

- Identity of the DF (self, classmate, unfamiliar)

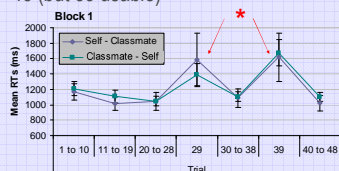
Experiment 1

DISPLAY:

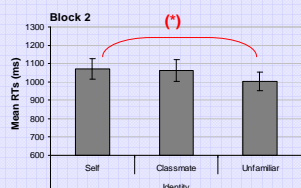


Digit-parity task: Judge whether the 2 digits have the same parity or not while ignoring the face

N=48 (but 33 usable)



The first presentation of each familiar DF slows RTs on the digit-parity task



When trials of Block 2 are split in 2 halves: Same effect of identity for the 1st half but no more effect for the 2nd half

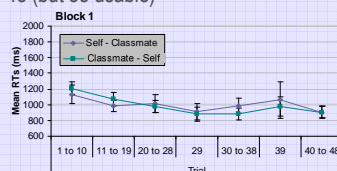
Experiment 2

DISPLAY:

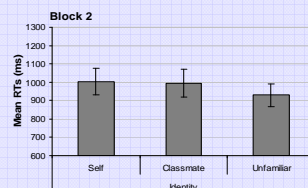


Same digit-parity task, but the DF face is presented at periphery (randomly on the left or on the right of the digits)

N=48 (but 38 usable)



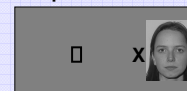
The first presentations of the familiar DFs has no significant effect on the digit-parity task



Still no significant effect of the presentation of the familiar DFs in Block 2

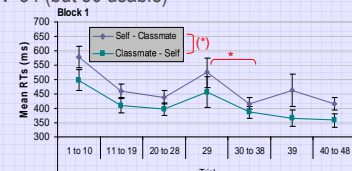
Experiment 3

DISPLAY:

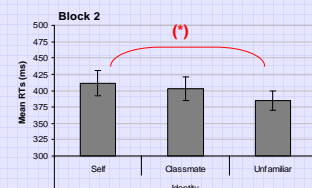


The DF is still presented at periphery, but the primary task is easier (shape identity judgment) → Distraction if more resources are available?

N=54 (but 50 usable)



Only the first presentation of a familiar DF elicit a weak distraction. Marginal effect of order



When trials of Block 2 are split in 2 halves: the effect of identity is non-significant for the 1st half but significantly appears in the 2nd half

Conclusion

- One's own face has some distractive abilities
- BUT only in **specific conditions**:
- When it is presented **within the focus of attention** of an observer engaged in a demanding primary task (but not if presented at periphery)
 - The distraction is **temporary** and **similar** to that produced by another **familiar face**
 - Surprise effect that habituates (see Harris & Pashler, 2004)
 - Some distraction can also occur when the own face is presented at periphery if enough attentional resources are available
 - Attentional shifts as the observer gets used to the task
- No automatic capture of attention by familiar and important faces

References

- Gronau, N., Cohen, A., Ben-Shakkar, G. (2003). *Journal of Experimental Psychology: General*, 132, 512-529.
- Harris, C.R., & Pashler, H. (2004). *Psychological Science*, 15, 171-178.
- Moray, N. (1959). *Quarterly Journal of Experimental Psychology*, 11, 56-60.
- Wolford, G., & Morrison, F. (1980). *Memory and Cognition*, 8, 521-527.

Acknowledgments

This research was supported by a grant from the Belgian Fonds de la Recherche Fondamentale Collective (Grant n° 8.4506.05 – 2.4539.05) to SB. CD is Scientific Research Worker at the N.F.S.R. (Belgium).

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