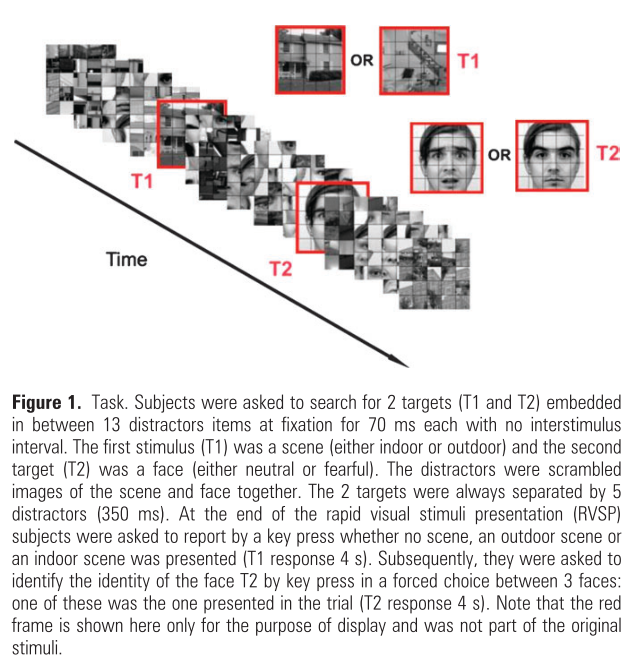
|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Reference | Nb trials | Nb Img | Display Img | Size | Position Distractor/Target | Target(s) | Distractors | source Image |
| De Martino (2009) | 3b / 48 t = 144 | 15 | 70 ms | / | T1 randomly 2 to 7 position  T2 after 5 D from T1 | intact scene T1, intact face (fear or neutral) T2 | scrambled pictures of scenes & faces → general distractor | KDEF |
| Ciesieldki et al. (2010) | 6 b/ 28 t = 168 | 17 | 100 ms | 320\*240 pixels | D on 4, 6, or 8 position;  T on 200, 400, 600 or 800 ms after D | Scene rotated 90° left or right | disgust, fear, erotic, or neutral distracter image → critical distractor | IAPS |
| Most & Jungé, 2008 | 4 b / 42 t = 168 | 12 | 100 ms | 9.4\*7.1 cm | D on 4, 6, or 8 position;  T on 200 or 300 ms after D | Scene rotated 90° left or right | Emotional scenes → critical distractor | IAPS |
| Piech et al., 2010 | 6 b / 32 t = 192 | 17 | 100 ms | 9.5\*7.5 cm | D on 4, 6, or 8 position;  T on 200 or 800 ms after D | Scene rotated 90° left or right | Food, romantic, and neutral | IAPS |
| Most et al., 2007 (exp 2) | 6 b/ 28 t = 168  (3 reward and 3 non reward). | 17 | 106 ms | 11.2\*8.4 cm  (9.2\*6.9 cm) | D on 4, 6, or 8 position;  T on 200 or 800 ms after D | Scene rotated 90° left or right | Erotic Img → critical distractors landscape → general distractors | IAPS |
|  |  |  |  |  |  |  |  |  |
| Current study | 6b / 32t = 192 | = 15 | **100 ms** | ? | D on every position; → general distractor  T on 200 or 400 ms after D | Neutral face in DC, gender in CC, fearful face in BC | Fearful face in DC, gender in CC, neutral faces in BC | ? |

### Emotional Attentional Blink → DC (fear distractor, Neutral target) / BC (Fear target, neutral distractor).

* Also works for conditioned stimuli (Smith et al., 2006 *Emotion*)
* The **standard AB with emotional T2** (our BC) characterizes **preferential target detection under a condition of limited attentional resources**, whereas the EAB (our DC) focuses on the **impact of attentional capture on the processing of other stimuli**. Difference between top-down / bottom-up processing.
* **We see little evidence of a goal-directed ability to overcome the EAB effect even when people receive monetary rewards for good performance (accurately detecting targets), and regardless of subjects’ evaluation of how hard they try to do the task (Most et al., 2007).**

### Other important ideas

* Placement of a blank immediately following the critical distractor typically attenuates the standard AB.
* Distinction between critical and noncritical distractors:
  + Scrambled versions of the negative distractors served to control for the impact of low-level visual properties such as colour and luminance.
  + The fact that the scrambled versions of the negative pictures did not induce spontaneous target perception impairments suggests that the impairments elicited by the negative images stemmed from their emotional nature rather than their low-level visual features.
* Our current deign has:
  + Decremental condition
    - As non-critical general distractors, fearful faces
    - As target, neutral face → One neutral face amongst X fearful faces
    - → Maybe better paradigm, as non-critical general distractors (scrambled fearful faces) and as critical distractors (one intact fearful face)
  + Beneficial Condition
    - As non-critical general distractors, neutral faces
    - As target, fearful face → One fearful face amongst X neutral faces
    - → Maybe better paradigm, as non-critical general distractors (scrambled neutral faces) and as critical distractors (one intact neutral face)
* Reason to have different lags:
  + The effect of EAB is the strongest at lag 2 and slowly declines after till almost no effect at lag 8
  + Even though the effect of incentives might not be strong enough to overcompensate the detrimental effect of emotional distractors at lag 2 when the emotional attentional blink is the strongest, it might be more efficient at lag 4 or 6
  + BUT performance is improved at lag 8 or longer lags, with notable individual differences in the magnitude of the effect (Bocanegra and Zeelenberg, 2009).
  + → Even in the decremental condition, if the neutral target is at lag 8 or later, the emotions might help the detection (-> performance like a sigmoid ???).
    - Maybe with the incentive the changing point of the sigmoid has a lower threshold?
    - Maybe add lag 10???

## RSVP

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Experiment RSVP  (192 trials) | Small reward  (4\*48 trials) | 1=DC1  (Was there a female?) | 100% D-Fearful Male  (16 trials) | 50% T-Neutral Male  (8 trials) | 2=DC2  (Was there a male?) | 100 % D-Fearful Female  (16 trials) | 50% T-Neutral Male  (8 trials) |
| 50% T-Neutral Female  (8 trials) | 50% T-Neutral Female  (8 trials) |
| 5=BC1  (Was there a female?) | 100% D-Neutral Male  (16 trials) | 50% T-Fearful Male  (8 trials) | 6=BC2  (Was there a male?) | 100 % D-Neutral Female  (16 trials) | 50% T-Fearful Male  (8 trials) |
| 50% T-Fearful Female  (8 trials) | 50% T-Fearful Female  (8 trials) |
| 3=CC1  (Was there a female?) | 50% D-Fearful Male  (8 trials) | 25% T-Fearful Male  (4 trials) | 4=CC2  (Was there a male?) | 50% D-Fearful Female  (8 trials) | 25% T-Fearful Male  (4 trials) |
| 25% T-Fearful Female  (4 trials) | 25% T-Fearful Female  (4 trials) |
| 50% D-Neutral Male  (8 trials) | 25% T-Neutral Male  (4 trials) | 50% D-Neutral Female  (8 trials) | 25% T-Neutral Male  (4 trials) |
| 25% T-Neutral Female  (4 trials) | 25% T-Neutral Female  (4 trials) |
| Large Rewards  (4\*48 trials) | DC1  (Was there a female?) | 100% D-Fearful Male  (16 trials) | 50% T-Neutral Male  (8 trials) | DC2  (Was there a male?) | 100 % D-Fearful Female  (16 trials) | 50% T-Neutral Male  (8 trials) |
| 50% T-Neutral Female  (8 trials) | 50% T-Neutral Female  (8 trials) |
| BC1  (Was there a female?) | 100% D-Neutral Male  (16 trials) | 50% T-Fearful Male  (8 trials) | BC2  (Was there a male?) | 100 % D-Neutral Female  (16 trials) | 50% T-Fearful Male  (8 trials) |
| 50% T-Fearful Female  (8 trials) | 50% T-Fearful Female  (8 trials) |
| CC1  (Was there a female?) | 50% D-Fearful Male  (8 trials) | 25% T-Fearful Male  (4 trials) | CC2  (Was there a male?) | 50% D-Fearful Female  (8 trials) | 25% T-Fearful Male  (4 trials) |
| 25% T-Fearful Female  (4 trials) | 25% T-Fearful Female  (4 trials) |
| 50% D-Neutral Male  (8 trials) | 25% T-Neutral Male  (4 trials) | 50% D-Neutral Female  (8 trials) | 25% T-Neutral Male  (4 trials) |
| 25% T-Neutral Female  (4 trials) | 25% T-Neutral Female  (4 trials) |

T = 200 or 400 sec after D -> 16 trials of 12 blocks

## Visual Search

|  |  |  |  |
| --- | --- | --- | --- |
| Experiment VS  (192 trials) | Small Rewards  2\* 48 = 96 trials | 1 = DC | Detect the neutral faces (50% female, 50% male)  2\*16 = 32 trials |
|
| 5 = BC | Detect the fearful faces (50% female, 50% male)  2\*16 = 32 trials |
|
| 3 = CC | Detect the females faces (50% fear, 50% neutral)  2\*8 = 16 trials |
|
| Detect the male faces (50% fear, 50% neutral)  2\*8 = 16 trials |
|
| Large Rewards  2\* 48 = 96 trials | 1 = DC | Detect the neutral faces (50% female, 50% male)  2\*16 = 32 trials |
|
| 5 = BC | Detect the fearful faces (50% female, 50% male)  2\*16 = 32 trials |
|
| 3 = CC | Detect the females faces (50% fear, 50% neutral)  2\*16 = 32 trials |
|
| Detect the male faces (50% fear, 50% neutral)  2\*16 = 32 trials |
|

## Memory

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Experiment RSVP  (192 trials) | Small reward  (4\*48 trials) | 1=DC1 | 100% D-Fearful Male  (16 trials) | 50% T-Neutral Male  (8 trials) | 2=DC2 | 100 % D-Fearful Female  (16 trials) | 50% T-Neutral Male  (8 trials) |
| 50% T-Neutral Female  (8 trials) | 50% T-Neutral Female  (8 trials) |
| 5=BC1 | 100% D-Neutral Male  (16 trials) | 50% T-Fearful Male  (8 trials) | 6=BC2 | 100 % D-Neutral Female  (16 trials) | 50% T-Fearful Male  (8 trials) |
| 50% T-Fearful Female  (8 trials) | 50% T-Fearful Female  (8 trials) |
| 3=CC1 | 50% D-Fearful Male  (8 trials) | 25% T-Fearful Male  (4 trials) | 4=CC2 | 50% D-Fearful Female  (8 trials) | 25% T-Fearful Male  (4 trials) |
| 25% T-Fearful Female  (4 trials) | 25% T-Fearful Female  (4 trials) |
| 50% D-Neutral Male  (8 trials) | 25% T-Neutral Male  (4 trials) | 50% D-Neutral Female  (8 trials) | 25% T-Neutral Male  (4 trials) |
| 25% T-Neutral Female  (4 trials) | 25% T-Neutral Female  (4 trials) |
| Large Rewards  (4\*48 trials) | DC1  (Was there a female?) | 100% D-Fearful Male  (16 trials) | 50% T-Neutral Male  (8 trials) | DC2  (Was there a male?) | 100 % D-Fearful Female  (16 trials) | 50% T-Neutral Male  (8 trials) |
| 50% T-Neutral Female  (8 trials) | 50% T-Neutral Female  (8 trials) |
| BC1  (Was there a female?) | 100% D-Neutral Male  (16 trials) | 50% T-Fearful Male  (8 trials) | BC2  (Was there a male?) | 100 % D-Neutral Female  (16 trials) | 50% T-Fearful Male  (8 trials) |
| 50% T-Fearful Female  (8 trials) | 50% T-Fearful Female  (8 trials) |
| CC1  (Was there a female?) | 50% D-Fearful Male  (8 trials) | 25% T-Fearful Male  (4 trials) | CC2  (Was there a male?) | 50% D-Fearful Female  (8 trials) | 25% T-Fearful Male  (4 trials) |
| 25% T-Fearful Female  (4 trials) | 25% T-Fearful Female  (4 trials) |
| 50% D-Neutral Male  (8 trials) | 25% T-Neutral Male  (4 trials) | 50% D-Neutral Female  (8 trials) | 25% T-Neutral Male  (4 trials) |
| 25% T-Neutral Female  (4 trials) | 25% T-Neutral Female  (4 trials) |

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Male | Female |
| 3 = CC1  (16) | Fearful | 75 %  (16/2\*.75=6) | 25 %  (16/2\*.25=2) |
| Neutral | 75 %  (16/2\*.75=6) | 25 %  (16/2\*.25=2) |
| 5 = BC1 | Fearful | 100 % | 0 % |
| Neutral | 50 % | 50 % |
| 1 = DC1 | Fearful | 50 % | 50 % |
| Neutral | 100 % | 0 % |

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Male | Female |
| 4 = CC2 | Fearful | 25 % | 75 % |
| Neutral | 25 % | 75 % |
| 6 = BC2 | Fearful | 0 % | 100 % |
| Neutral | 50 % | 50 % |
| 2 = DC2 | Fearful | 50 % | 50 % |
| Neutral | 0 % | 100 % |