Upper and Lower Visual Field Differences in Self-Face Recognition

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Introduction

Self-Face Recognition (SFR) may be an indicator of self-awareness (Keenan, 2000). We previously showed that SFR is different from the recognition of unfamiliar faces. SFR was faster and more accurate in the Upper Visual Field (VF) than the Lower VF, whereas unfamiliar faces were recognized equally quickly and accurately in the Upper and Lower VF. In this experiment, we examined whether the Upper/Lower VF effect was due to familiarity. We contrasted SFR with the recognition of familiar friends.

Method

- 21 undergraduate students (17 female) completed this experiment for course credit.
- This experiment was conducted using E-Prime.
- A trial consisted of a Target face (frame highlighted in red) and a Distractor face, both lateralized tachistoscopically and simultaneously.
- The Target face and Distractor face could both be of the self or a familiar friend.

Results

- A 2 (Target: self vs. familiar) x 2 (Distractor: self vs. familiar) x 2 (Target VF: LVF vs. RVF) x 2 (Target Position: Upper VF vs. Lower VF) x 3 (Distractor Relative Position: Vertical vs. Horizontal vs. Diagonal) ANOVA was carried out. Dependent measures were mean accuracy and median reaction times.

Discussion

- Subjects recognized familiar face Targets with equal accuracy in the Upper and Lower VF.
- In contrast, subjects recognized self face Targets less accurately in the Lower VF than in the Upper VF.

Conclusion

SFR may be modular, using different strategies and a different resource pool than the recognition of familiar and unfamiliar others.

References