Unconscious Detection of One's Own Image

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Supplementary Materials

Frequency of self-face presentations. The relative frequency of self-face presentation is related to the relation of intra-experimental and pre-experimental familiarity in research on self-referential processing. As our previous studies showed, intra-experimental familiarity has little impact on the amplitude of ERPs elicited by the self-face (i.e. a ceiling effect, Tacikowski, Jednoróg, Marchewka, & Nowicka, 2011). However, the intra-experimental familiarity does influence the amplitude of ERPs evoked by other-faces, i.e. towards the end of the experiment other faces evoke greater ERP response, as they become more familiar (Tacikowski & et al., 2011). Therefore, the current experimental design is a conservative approach to testing the attentional capture effect of self-face as the other-faces were likely also to trigger such processes.

It is also worth noting that in the present study we were not aiming at identifying the precise factor that causes shifts of attention to the self-face. It might be the fact of representing one's own self, but at the same time it might be high familiarity of the self-face. This is pointed out in the discussion section. Indeed, in our experiment the self-face benefited from greater pre- and intra-experimental familiarity. Future studies should aim to distinguish contribution of these different factors by comparing self-face, with a familiar face, and an unfamiliar face which exhibits high intra-experimental familiarity.

Another reason behind such a design is its high ecological validity. In real-life situations, humans tend to be exposed to their own image more often than to a single unfamiliar face. This is a core concept related to the self vs. other differentiation processes that constitute the underpinnings of self-preferential attentional effects. The social environment is an essential context that self-related processes are embedded in. The present study, therefore, was designed in such a way that the highest possible ecological validity is achieved by taking the social context into account.

References

Tacikowski, P., Jednoróg, K., Marchewka, A., & Nowicka, A. (2011). How multiple repetitions influence the processing of self-, famous and unknown names and faces: an ERP study. *International Journal of Psychophysiology*, 79(2), 219-230.