

Title: Have we met before? Individual differences in face recognition

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It has been consistently shown that the processing of identity information is remarkably reliable for familiar, but highly error prone for unfamiliar faces: Familiarity with individual faces is characterized by increased tolerance for variability in appearance, whereas for unfamiliar faces even small image changes can make identity processing very difficult. But not all people reliably recognize familiar faces. There are large inter-individual differences in this ability, even within the “normal” population, and the basis for these differences is still poorly understood. Here I will present data from behavioral and neurophysiological studies that investigated face learning and face recognition, taking into account individual differences. Using special stimuli such as e.g. caricatures and lookalikes, we investigated contributions of shape and texture information for face identification and matching, as well as individual differences in these skills. Overall, our data revealed higher diagnosticity of texture compared to shape for both matching and identification, particularly for familiar faces. Furthermore, we found neurophysiological evidence for a larger flexibility of stored mental face representations in good face recognizers. Finally, I will present data from a recent study in which poor face recognizers were trained with shape or texture caricatures derived from 3D photographs.