

Emotional processes not only serve to record the value of sensory events, but also to elicit adaptive responses and modify visual perception. Recent research using functional brain imaging in human subjects has provide confirmation for numerous clinical observations indicating that areas involved in both emotional perception and visual attention are overlapping. It is pointed out here between the significant importance of the parietal lobe and the ventral and dorsal visual attention systems.

Prism adaptation (PA) is a promising tool for ameliorating many deficits in neglect patients and inducing neglect-like behaviour in healthy subjects. This method consists of a series of pointing movements during a prismatic shift of the visual field to the right or left by approximately 10 degrees. However subsequent studies have demonstrated that PA can reduce a variety of different neglect symptoms such as the rightward attentional bias, visual imagery, the mechanisms underlying these effects remain unclear. Interestingly, recent works has suggested that PA may primarily reduce symptoms of neglect by influencing regions in the dorsal or ventral visual stream that are directly affected by PA and are known to play important roles in controlling motor responses such as reaching and eye movements, as well as attention.

As part of the project, we want to test hypotheses about the effect of changes in visual orientation influence of upward and downward spatial deviations of spatial attention induced by prism adaptation on emotional pictures recognition: (with prismatic adaptation) on visual perception of emotions. This project provides an innovative, experimental approach to the study of emotional and attention processes, and by using EEG it will provide a broad spectrum of information about the dynamics of emotional processing. In addition, the purpose of the study is to provide in-depth knowledge of the mechanisms of neuroplasticity that occur during prism adaptation. We also attempt to gain more vision into the mechanisms of amelioration underlying prism adaptation to improve the process of effective rehabilitation.