Motivation, Emotion & Cognitive Control

Action and performance monitoring and the ability to learn from errors and feedback are important executive functions which allow humans to adapt flexibly to changing environmental conditions. Recent research shows that emotional and motivational factors play an important role in these processes. Our research unit investigates the influences of gains and losses, self-relevant failure, and personality traits on different control processes.

Selected publications:

Ferdinand, N. K., Kapsali, E., Woirgardt, M., & Kray, J. (2022). Developmental differences in processing the valence and magnitude of incentive cues: Mid-adolescents are more sensitive to potential gains than early-or late-adolescents. *Cognitive, Affective, & Behavioral Neuroscience*, *22*, 557—573.

Unger, K., Kray, J., & Mecklinger, A. (2012). Worse than feared? Failure induction modulates the electrophysiological signature of error monitoring during subsequent learning. *Cognitive, Affective, & Behavioral Neuroscience, 12(1)*, 34—51.

Unger, K., Heintz, S., & Kray, J. (2012). Punishment sensitivity modulates the processing of negative feedback but not error-induced learning. *Frontiers in Human Neuroscience, 6,* 1—6.