

## Topics supervised by Peter Gröpel

### Topic 1: Mechanisms of choking interventions

Choking under pressure describes suboptimal sport performance in stressful situations, such as missing a decisive penalty shot in soccer. Sport psychologists developed several effective choking interventions that help athletes to prevent choking (see Gröpel & Mesagno, 2019, for review). However, the exact mechanisms how these interventions work are less known. Why does a particular intervention work? In your master thesis, it is expected that you choose one particular choking intervention and tests its underlying psychological and/or physiological (HR, EDA, gaze behavior etc.) mechanisms.

Preparatory literature: Gröpel, P., & Mesagno, C. (2019). Choking interventions in sports: A systematic review. *International Review of Sport and Exercise Psychology*, 12, 176-201. <https://doi.org/10.1080/1750984X.2017.1408134>

### Topic 2: The role of self-motivation in endurance sports

Mental fatigue impairs endurance performance, but motivational strategies such as goal setting and self-talk can counteract and help maintaining effort (see McCormick et al., 2015, for review). Consequently, endurance athletes who are more able to self-motivate should be better in performance, be it the marathon finish time or the adherence to practice, than those less able to self-motivate. Also, endurance athletes should be generally higher in the self-motivation skill than athletes from strength or accuracy sports. In your master thesis, it is expected that you examine (one of) these notions.

Preparatory literature: McCormick, A., Meijen, C., & Marcora, S. (2015). Psychological determinants of whole-body endurance performance. *Sports Medicine*, 45(7), 997-1015. <https://doi.org/10.1007/s40279-015-0319-6>

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## Topics supervised by Clara Scheer

### Topic 3: Emotional contagion in sports and the performing arts

Independently of the context, performing under pressure can be a great challenge and is often accompanied with a performance anxiety. A consequent performance decrement has been described for individuals (i.e., choking under pressure in sports) and for groups (i.e., team collapse). During a team collapse, players seem to be affected by the underperformance of their team members (Wergin et al., 2018). To date, there is little evidence about the underlying mechanism that cause a collective team collapse. Thus, the aim of this study is to investigate physiological synchrony (Gordon et al., 2020) under pressure. The master thesis would be part of the aforementioned project. You will be included in data acquisition, in recording and editing physiological data (EKG and skin conductance) and learn how to statistically analyze results and write a scientific thesis.

Preparatory literature: Gordon, I., Gilboa, A., Cohen, S., Milstein, N., Haimovich, N., Pinhasi, S., & Siegman, S. (2020). Physiological and behavioral synchrony predict group cohesion and performance. *Scientific Reports*, 10(1). <https://doi.org/10.1038/s41598-020-65670-1>

Wergin, V. V., Zimanyi, Z., Mesagno, C., & Beckmann, J. (2018). When suddenly nothing works anymore within a team - Causes of collective sport team collapse. *Frontiers in Psychology*, 9. <https://doi.org/10.3389/fpsyg.2018.02115>