

Keynote Speaker of the 16th ISSP World Congress - Sponsored by Shine Tak Foundation

Professor Markus Raab

- Professor of Psychology, Institute of Psychology, Department of Performance Psychology at the German Sport University Cologne
- Past-President of the European Federation of Sport Psychology (FEPSAC)
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Keynote topic

- Neuroscience/Psychophysiology

Research interests

- Sport and exercise psychology, neuroscience/psychophysiology, embodied cognition, motor learning and motor control
- Judgment, decision-making, motor learning and control, embodied cognition are areas of his profile studied from a dynamic and probabilistic cognitive psychology perspective using simple heuristics

Experiences

- Extensive leadership experience - Past-president of FEPSAC, Past-vice-president of asp, Past-deputy spokesperson of DGPs, Senator of the German Sport University Cologne.
- Recognized with numerous awards - From organizations like DOSB, asp, FEPSAC, DGPs, ECSS, Springer, and others.
- Significant editorial experience - 13 editorial roles including editor-in-chief, associate editor, and editorial board positions with major journals. Also supervised 20+ PhD students, many of whom won awards.

Title

The power of simplicity – A psychophysiological perspective on sport and exercise psychology

Abstract

The question of how humans are capable of making fast decisions on what to do and how to do it fascinates researchers. Historically, motor learning and motor control theories have focused on explaining how to produce movements, while cognitive psychology theories have focused on explaining how to choose between actions. But is this a good strategy in research? In recent years, it has been claimed that such a divide and conquer strategy limits our understanding of behavior that often requires us to choose and act simultaneously under limited time and in changing environments. This simultaneous understanding of “what and how” is especially relevant in sport, exercise, and performance psychology, trying to describe, understand, and change complex behavior.

Here, I will introduce the concept of simple heuristics, which are rules of thumb, to explain how, in parallel, we can make embodied choices when the body plays a pivotal role in behavior. From a psychophysiological perspective, it is often believed that the complexity of the system and the dynamic and probabilistic behavior in ever-changing environments require a complex answer. I rather try to elaborate on fast and frugal heuristics and thus a simple explanation that advocates the power of simplicity for cognitive adaptations, sometimes coined as “Homo Heuristicus” and transfer this to sport, exercise and performance psychology.

New evidence for the validity of this paradigmatic change will be provided by others and our research programs that encompass examples from simple millisecond behavior to complex sport performance behavior over time. The research agenda will focus on how experiences in interdisciplinary teams can foster new insights and how my own experience in multi-disciplinary projects provide a new role of sport, exercise and performance psychology as a team member in multi-disciplinary projects allowing a more holistic approach to diagnostic and interventions in sports acknowledging new technology and a psychophysiological perspective. I will conclude with a proposal on how research programs, designs of studies, and the use of methods could be altered. The power of simplicity may assist us towards new insights, more societal relevance, and an interdisciplinary psychophysiological approach to sport, exercise, and performance psychology. I will extend from my predictions towards a “sport and exercise psychology 2050”, I coined a few years ago (Raab, 2017, <https://doi.org/10.1007/s12662-016-0435-y>).

Keywords

Psychophysiology, neuroscience, motor and cognitive processes, performance enhancement.