

1. Title: Optimal Action. Using the example of high speed. An Empirical Approach.
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4. Thematic area: (1) **Decision Making**, Communication and Conflict
5. Abstract:

Objective: This study examines the constitutive elements of optimal action on the basis of experience reports from experts in speed disciplines. It concentrates on the two structurally related action spaces of sport and aviation, which, as exemplary, over-formed micro-worlds, enable a laboratory-like investigation of the topic. Since such action spaces require effective strategies for optimal action and decision-making under time pressure with life-threatening consequences, revealing results were expected.

Methods: Firstly, a theoretical framework was created on the basis of action-space-specific, cognitive-psychological and action-theoretical considerations, which enables a differentiated view of person-environment interaction. Second, twenty-four experts in speed disciplines (Formula 1 car racers, downhill skiers, fighter jet pilots, airplane pilots, ...) were qualitatively interviewed and their subjective theories about optimal action strategies are analyzed and systematized. With this qualitative-empirical research approach, an actual “science of those affected” was conducted. This implied a prior reflection on the theoretical premises of the interpretative-constructivist paradigm as well as on the research process, on the criteria of the expert sample and on the researcher as an instrument.

Result: Empirically derived category systems, process models and hypotheses were contrasted with psychological concepts such as perception, cognition, emotion, motivation, consciousness, volition and personality as well as with dimensions of optimal action including its organizational structure. This led to an integrative model of optimal action, which is composed of parallel and serial action components and thus shows the interdependence of different regulatory mechanisms.

Conclusion: The resulting model of optimal action suggests implications for training science, action theory, cognitive psychology and developmental psychology. These conclusions also seem to be of interest for many fast-paced work environments beyond sports and aviation. Therefore, this study aims to relate the results to individual and collective situations in business or society. However, further in-depth research is recommended.

6. Key-words: Decision making, Emotions, Speed of change