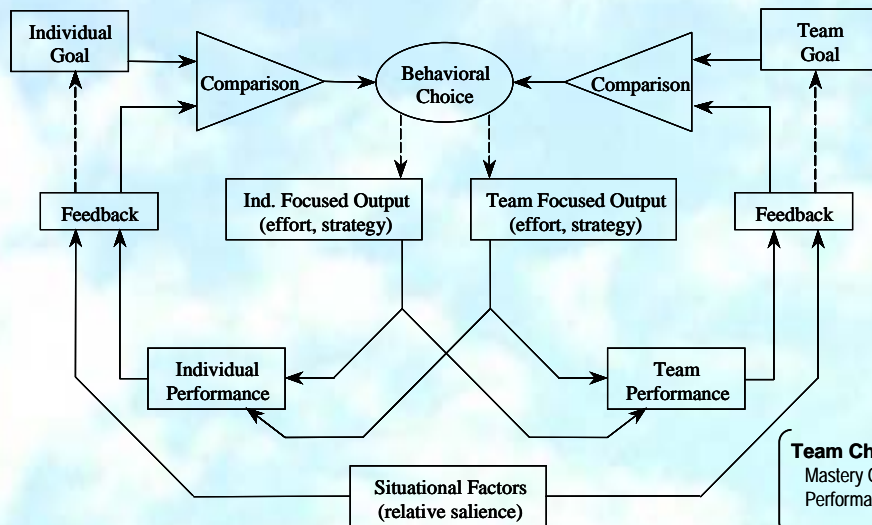


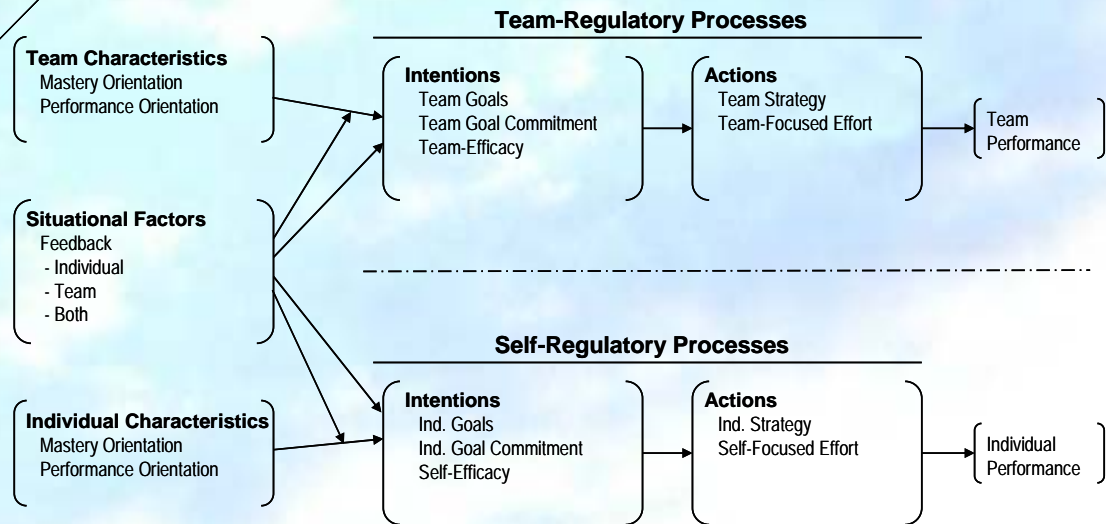
Dynamic Resource Allocation and Adaptability in Teamwork

Goal: Model and optimize the capability of team members (a) to *dynamically* allocate limited cognitive resources to accomplish individual and team goals and (b) to *adapt* resource allocation to fit shifting task contingencies



Teamwork requires team members to regulate attention and effort around multiple goals—individual and team—and to shift the focus of regulation as the situation dictates.

This dynamic resource allocation process accounts for both individual *and* team learning and performance (DeShon, Kozlowski et al., 2004, *Journal of Applied Psychology*).



NOTE: Constructs above dashed line represent *team*-level constructs. Constructs below line represent *individual*-level constructs.

Research Test Bed: *TEAMS*im

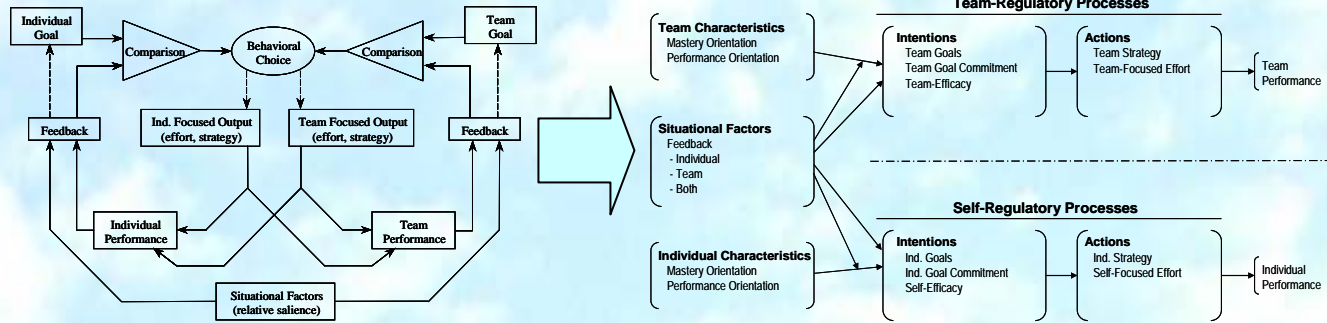
Team Event-Based Adaptive Multilevel Simulation

Kozlowski, S. W. J. & DeShon, R. P. (2004). A psychological fidelity approach to simulation-based training: Theory, research, and principles. In E. Salas, L. R. Elliott, S. G. Schflett, & M. D. Covert (Eds.), *Scaled worlds: Development, validation, and applications* (pp. 75-99). Burlington, VT: Ashgate Publishing.

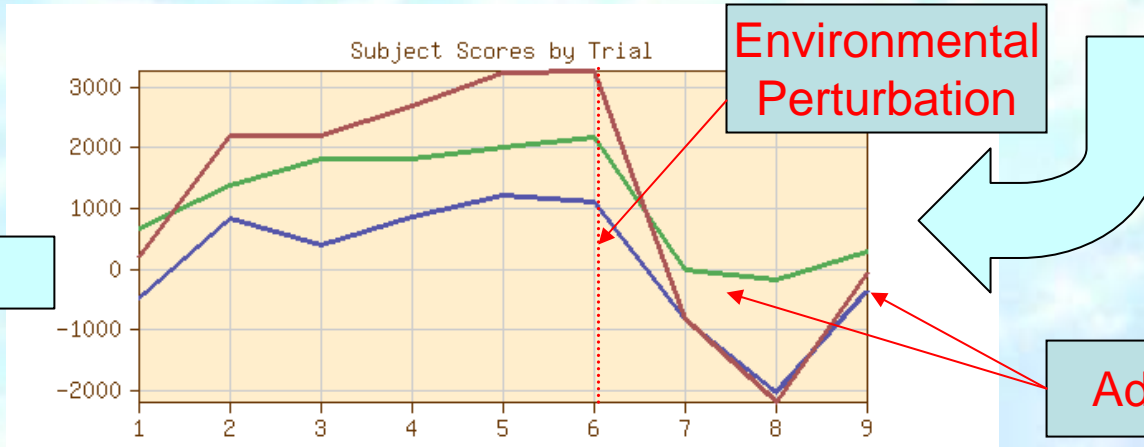
AWACs Simulation based on a Cognitive Task Analysis [High Psychological Fidelity / Low Physical Fidelity]



Technical Approach and Results



NOTE: Constructs above dashed line represent *team-level* constructs. Constructs below line represent *individual-level* constructs.



Payoff for the Air Force: Development of principles, tools, and techniques designed to optimize dynamic and adaptive Resource allocation in teams to yield maximum performance under shifting task contingencies.

Applications: Simulation design, feedback systems, decision support, principles for training and instructional design.