

Commentary on “Innovation in Scientific Multiteam Systems: Confluent & Countervailing Forces” (DeChurch & Zaccaro)

Presentation for:

Committee on The Science of Team Science
Board on Behavioral, Cognitive and Sensory Sciences
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The statements and opinions expressed herein are those of the author, and do not represent the official position of the Department of Defense or U.S. Army.



Mind The Gap



Processes are often more important than Inputs (compositional, linkages, developmental). However, management of between-team boundaries within an MTS is critical.

- Team Charters are recommended, but...
- How do compositional and linkage attributes of a scientific MTS reinforce/counter-act Team Charters?

Geographic/temporal distribution

- Functional variation
- Disciplinary variation
- MTS structure (hierarchy, power distribution, interdependence)



MTS “Health” Monitoring



Emergent states can be both critical and diagnostic of system weaknesses.

- How do compositional and linkage attributes of a scientific MTS affect critical emergent states (e.g., trust, transactive memory, collective efficacy)?
 - Trust, cohesion
 - Shared mental models, transactive memory
 - Collective efficacy
- How can emergent states be effectively monitored (without surveying ourselves to death)?



Complexity, Not Linearity

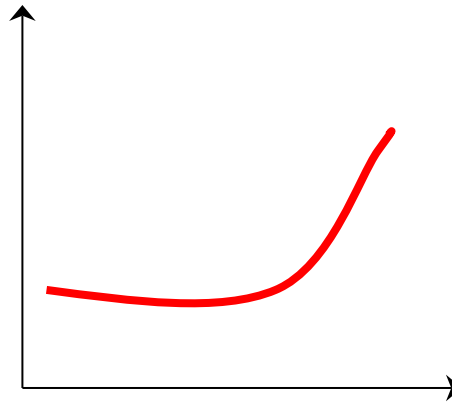
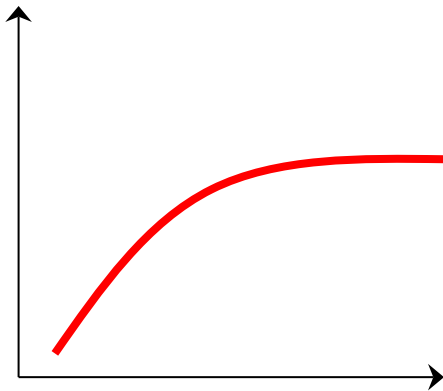
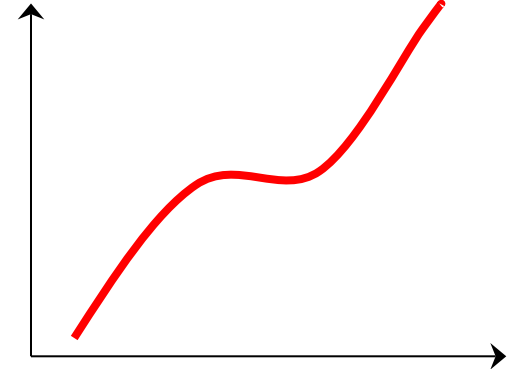
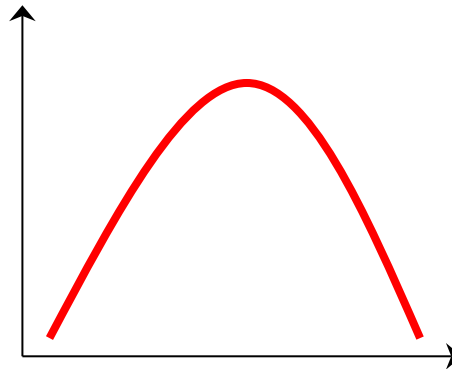
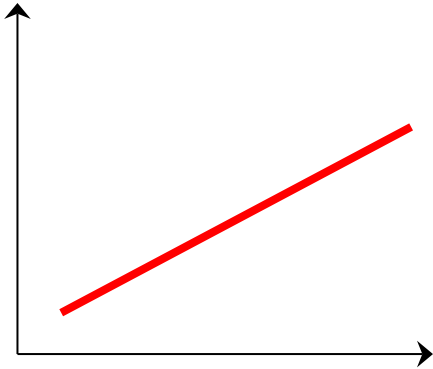


Confluence & Countervalance of factors across Team and MTS levels

- The world is not linear, it has asymptotes and inflection points. We need to understand...
 - When enough is enough.
 - When more is not better, more is worse.
 - ✓ *Also when more is better until it becomes worse until it becomes better again*



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Confluence & Countervalance of factors across Team and MTS levels

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 - ✓ *Also when more is better until it becomes worse until it becomes better again*
- Optimization solutions for prioritizing team and MTS effectiveness
 - Finding the “sweet spot” may be the right focus, not focusing only on team or MTS performance.
 - What is the criterion?
 - ✓ Publication rate / total
 - ✓ Transitions & applied developments
 - ✓ Innovation & creativity
 - ✓ Paradigm “tremors” and shifts