Training and Mission Rehearsal's Contribution to Defeating Disruptive Technologies

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Overview

- **Defense Science Board Task Force "*Training Superiority & Training Surprise*"**

- **Asymmetric Warfare and Training to Adaptability**

- **Emerging Technologies and Training Capability**

- **Summary**

Training Superiority & Training Surprise

- **2001 Defense Science Board Task Force Report**

  "The superb performance of our military in the 1990s was not just the result of technological superiority but equally of TRAINING SUPERIORITY"

  "Training superiority is ours to lose and for others to gain"

Training Superiority & Training Surprise

- **Key Thoughts**
  - **The first training revolution was the standup by the Services of large force, "full scrimmage" training venues**
  - **Training must become an integral part of the acquisition of hardware or we will fail to realize the full potential of our superior technology**
  - **Future weapons technology appears to require more training, not less**
  - **Most training R&D today is ad hoc, local and small scale**

Training Superiority & Training Surprise

- **Warfighting success is as dependent upon the proficiency of people as it is upon hardware with which they fight**

- **If training is to supply people who can fight under new paradigms. . .it cannot be done in the old way, based upon the existing training system**
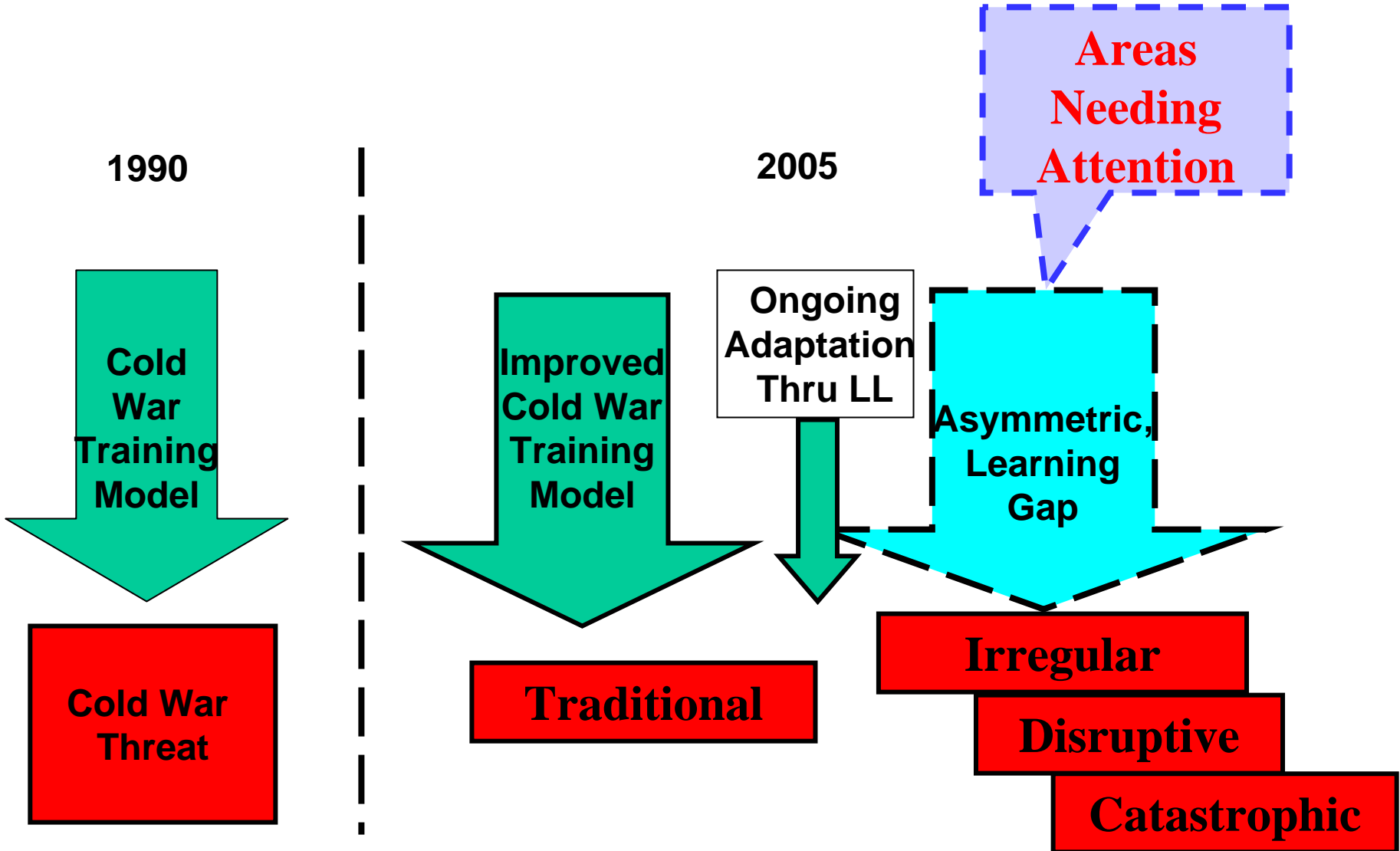
Asymmetric Warfare and Training to Adaptability

- **IDA Study "Learning to Adapt to Asymmetric Threats"**

- **Asymmetric threats in the 21st Century are largely unpredictable**

- **Given this unpredictability. . .the key skill that needs to be trained to is adaptability**

- **DoD needs to revise its training paradigm to improve its ability to adapt to new threats**
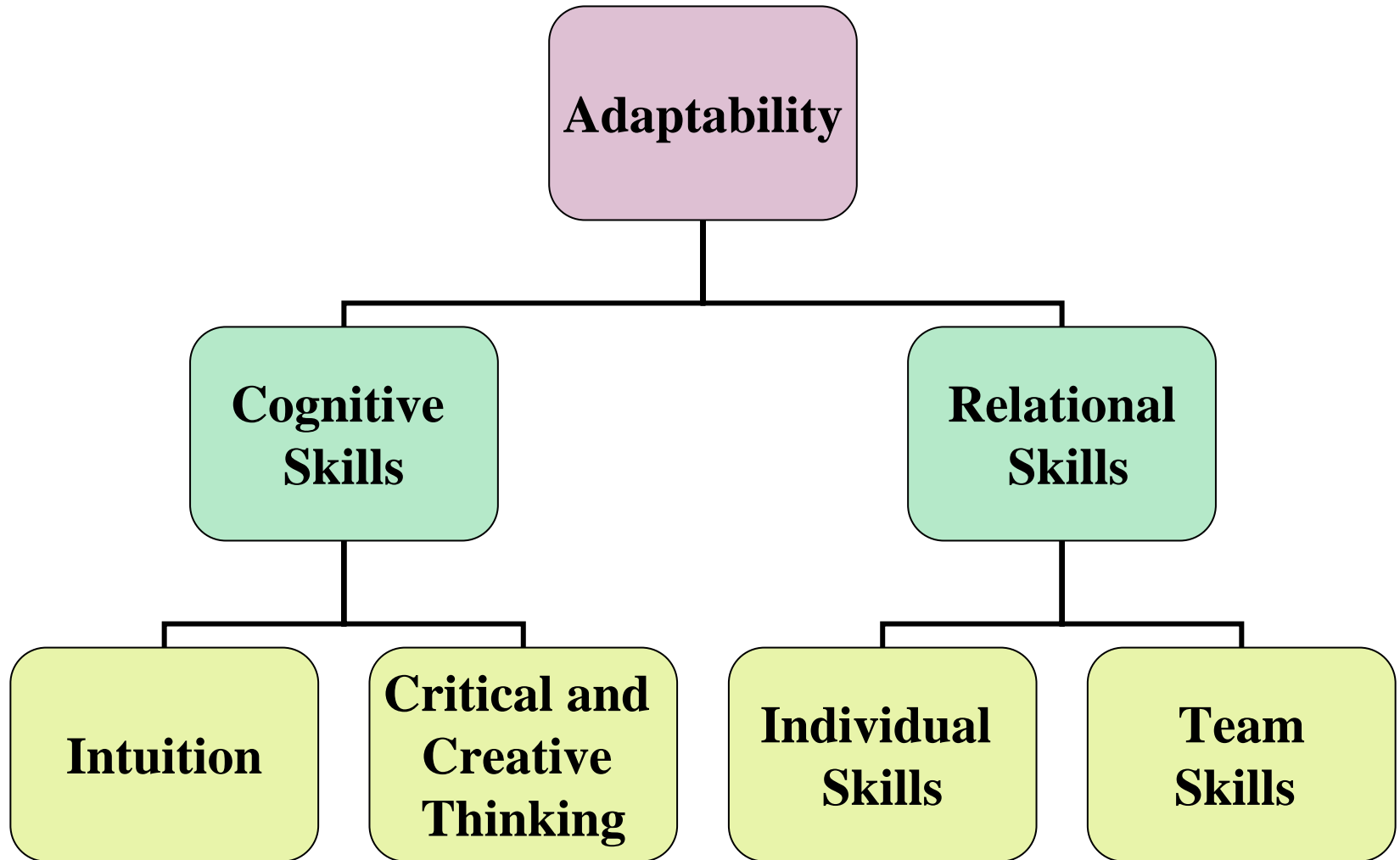
Asymmetric Warfare and Training to Adaptability

1990

2005

Areas Needing Attention

Cold War Training Model

Cold War Threat

Improved Cold War Training Model

Ongoing Adaptation Thru LL

Asymmetric, Learning Gap

Traditional

Irregular

Disruptive

Catastrophic

Asymmetric Warfare and Training to Adaptability
Basic Findings

- **DOD learning environment must prepare individuals, units, and staffs to adapt quickly to unpredictable missions and tasks**

- **Current training and education tools are necessary but not sufficient**

- **DoD needs to develop new adaptability learning tools**
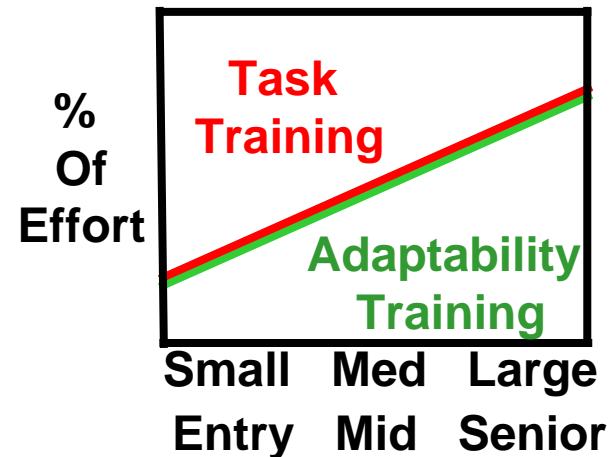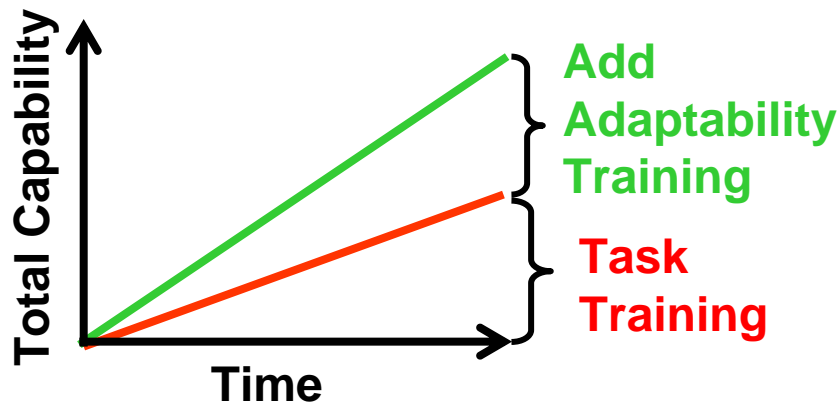
Components of Adaptability

Adaptability
- Cognitive Skills
  - Intuition
  - Critical and Creative Thinking
- Relational Skills
  - Individual Skills
  - Team Skills

Adaptability Learning Goals

- **Create adaptable individuals and units/organizations more capable of operating in the new era of asymmetric threats**
  - **Create the cognitive and relational skills essential to enhanced adaptability**
- **Develop adaptability learning opportunities for individuals, units/organizations**
- **Integrate adaptability training into existing learning system**

Total Capability

Add Adaptability Training

Task Training

Time

% Of Effort

Task Training

Adaptability Training

Small	Med	Large
Entry	Mid	Senior

Asymmetric Warfare and Training to Adaptability

- **IDA recommendations include:**
  - **Expand upon Army's Battle Command Knowledge System**
  - **Expand use of decision making exercises to develop adaptability-related skills**
  - **Develop a robust Red Teaming structure with both online and mobile training teams**
  - **Leverage online capabilities to provide self-development programs**
  - **Conduct an experiment or demonstration program to investigate the potential for adaptability learning efforts**

Emerging Technologies & Training Capability

- **New visualization tools are needed**
  - **Computer network attack and defense**
  - **PYSOPS, Civil Affairs and Nation Building**
  - **Understanding Counter Insurgency catalysts**
  - **Non-kinetic and kinetic skills interface/transition**
- **Disruptive and Asymmetric threat analytical forecasting**
- **Teaching empathy, language and culture**
- **Training capabilities must target both the "digital immigrant" and "digital native"**

Emerging Technologies & Training Capability

- **Emerging capabilities**
  - **DARWARS AMBUSH**
  - **Civil Effects Leadership Training System**
  - **"Immersive Infantry Trainer"**
  - **Second Life™ and other Massively Multiplayer online gaming opportunities**
  - **"Peacemaker: The Game"**

Summary

- **If training is to supply people who can fight under new paradigms. . .it cannot be done in the old way, based upon the existing training system**

- **Bottom Line: The key to defeating disruptive and asymmetric adversaries. . .is to leverage the richness of our human capital. . .trained with the best capabilities our technology can provide**

Questions