
CENTER FOR ADVANCED



DEFENSE STUDIES

“Innovation for Peace”

Strategy and Network Behavior

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Thursday, May 12, 2011



AGENDA



Introduction: The Speaker's Suit



The Impact of Strategy



Understand the Network



Apply Understanding



Understand Yourself



Operational Approaches



Conclusion: Fit the Customer

Questions



INTRODUCTION



The Center for Advanced Defense Studies

- A Washington, DC-based non-profit dedicated to non-partisan research, education, and implementation programs to enhance global security
- “Innovation for Peace”- multi-disciplinary approaches to complex security challenges.
- Intent-Centric Paradigm [Howard 2000]
 - “It is not about the data, it is about how real people use data”



The Speaker’s Suit



THE IMPACT OF STRATEGY

- Strategy: The organization of assets and resources in space and time to achieve freedom of action
- Traditional Strategies: Annihilation, Attrition, Exhaustion
- Traditional Approaches: Direct (Government); Indirect (Population)
- Context is King! –know yourself and the adversary (sometimes they are the same)

Operational Success is NOT Strategic Success
(Phyrrus)



UNDERSTAND THE NETWORK

- Networks have fuzzy boundaries
 - Human networks do not behave like computer networks
 - Networks are dynamic
-
- Models are always flawed (but useful)
 - Operational Network Analysis is not Dynamic
 - Dynamic Social Network Analysis is not Human
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- Models can be made better through continuous analysis
 - (DEDUCTION) Threat Process Model → Activity → Observable → Collection Tasking → Analysis (ABDUCTION) → Tasking → Observable → Activity → New Threat Process Model (INDUCTION)



APPLY UNDERSTANDING

Knightsian Segmentation

- Economics: Capital Market Governance [Boyko, 2009]
- Predictable, Probable and Uncertain (Rumsfeld's "Known Knowns; Known Unknowns; and Unknown Unknowns")

CADS Adversary Behavioral Studies

- Cultural and Conflict Studies- Dr. Jeff Reeves
- Survey of 5 domains- Ms. Sarah Catanzaro
 - key concepts, weaknesses, tools, and thought leaders. Book and Conference in the Fall of 2011.
 - Dynamic Social Network Analysis; Psychology; Economic Models; Organization Theory; Agent-Based Modeling



UNDERSTAND YOURSELF



The Counter-Threat Cycle

- Persistent Environment
- Deter, Detect, Prevent, Protect, Remediate, Recover



Principles of the Defense

- Preparation, Concentration, Disruption and Flexibility
- Protective Counter-measures

New Threat= Vulnerability X Intent X Consequences
Protective Counter-measures



Prioritize Counter-measures

- Predictable Threats by intensity
- Probable Threats by certainty and intensity
- Uncertain Threats



OPERATIONAL APPROACHES



Operational Approaches and Strategy

- Leadership Targeting (Exhaustion, Attrition, Annihilation)
- Coherence Targeting
- Logistics Targeting
- Infrastructure Targeting
- Sanctuary Targeting
- Connectivity Targeting

• ***How do NX lose effectiveness?***

- *C2 loss*

- *System failure*

- *Loss of assets to another NX*

• ***How do NX die?***

- *Factionalization (Loss of Trust)*

- *Drift (Lack of Use)*



MAKE A SUIT THAT FITS



Segmenting Threat: Intent-Centric Security

- We first understand the nature of the network
- We have to understand our own goals
- We must apply solutions to the selected Threat that **fit**

Dealing with Uncertain Threats



- There is no silver bullet for Unknown Unknowns
- Create Certainty rather than reduce Uncertainty- proactively influence the network to identify and better understand threats.



QUESTIONS?



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