Threatcasting: Preventing Strategic Surprise

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Joint work with ASU's Brian David Johnson and ACI's LTC Natalie Vanatta

NATO OR&A 2018
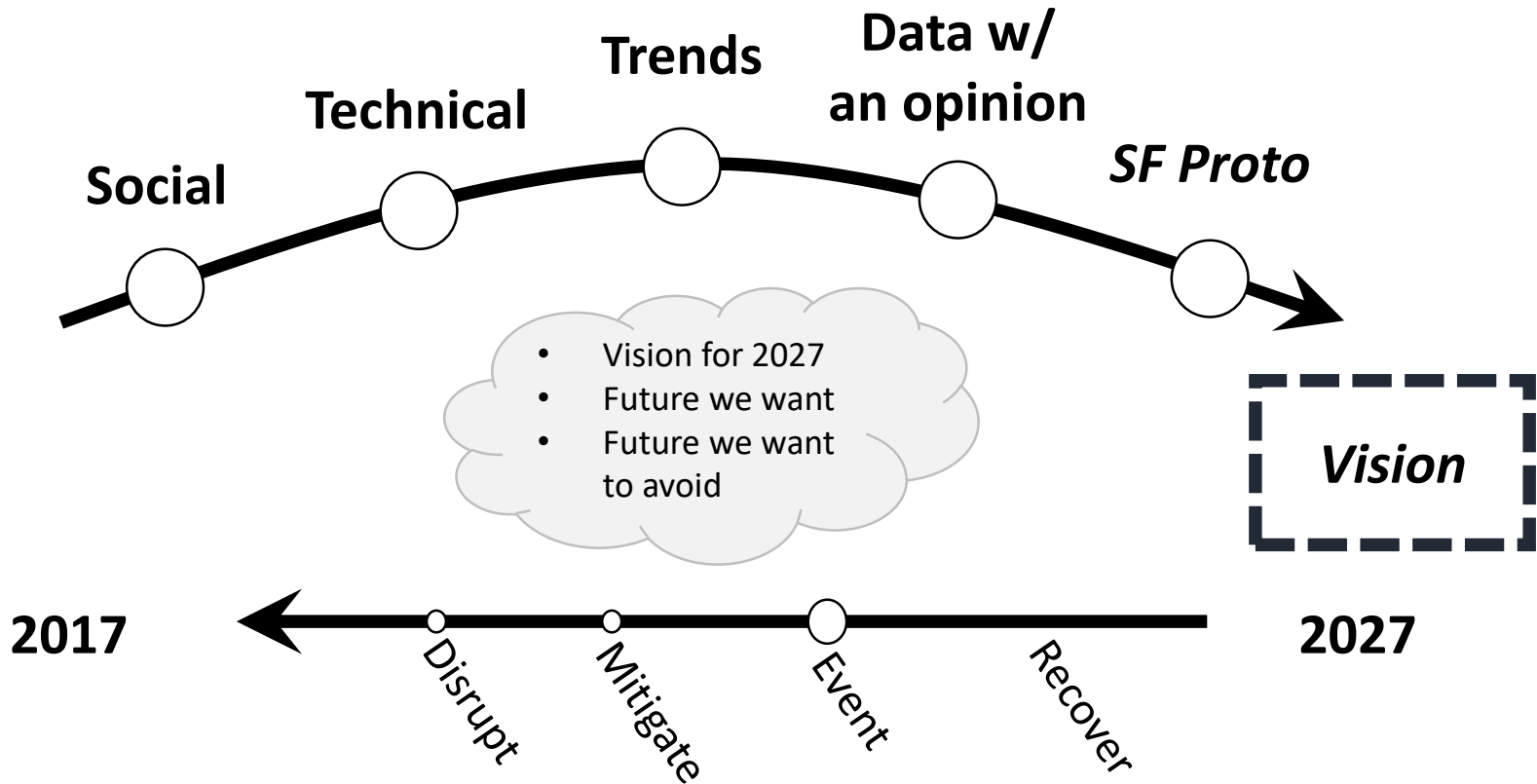
"Predicting the future is a hopeless, thankless task, with ridicule to begin with and, all too often, scorn to end with."

- Isaac Asimov

ASU
ARIZONA STATE
UNIVERSITY

www.threatcasting.com

Threatcasting is a conceptual framework and process that enables multidisciplinary groups to envision threats ten years in the future and then systematically plan what organizations and individuals can do to disrupt, mitigate and recover from these threats.

Social **Technical** **Trends** **Data w/ an opinion** *SF Proto*

- Vision for 2027
- Future we want
- Future we want to avoid

Vision

2017 **2027**

Disrupt Mitigate Event Recover

……drives our research priorities in order to help the Army avoid strategic surprise

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The year is 2025 and automation is pervasive. From clothing to appliances to self-driving vehicles, it seems there is an embedded computer everywhere. The benefits of the Internet of Everything are taken for granted by most, but not all.
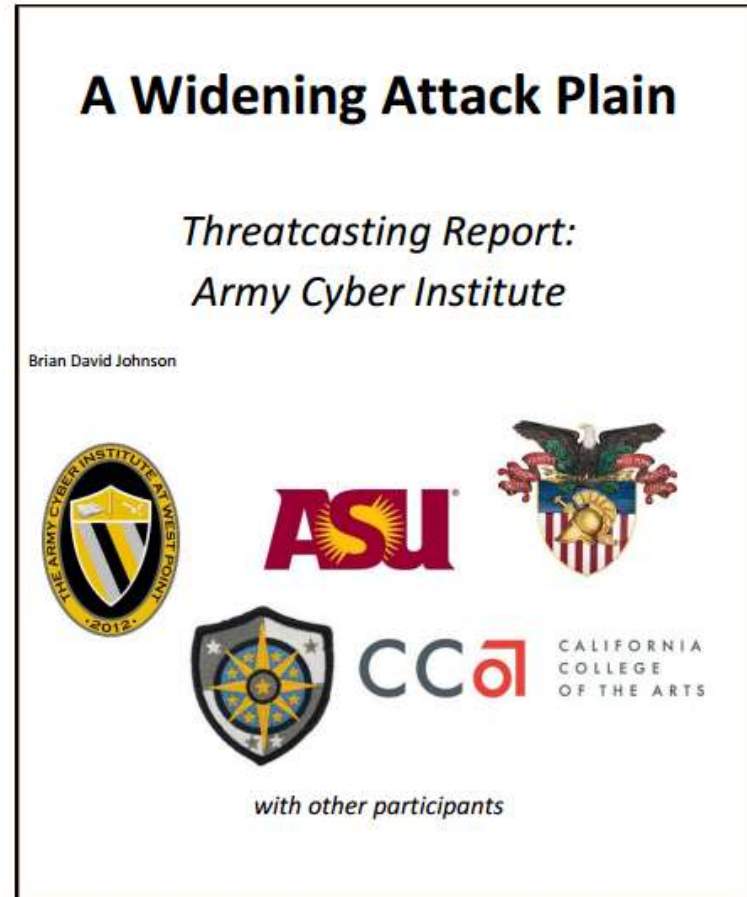
Mike is a frontline supply chain supervisor working at a regional distribution center near the port of Red Hook, Brooklyn. On a crisp autumn day, he would normally kill time at work by tracking the value fluctuations of the handful of stocks he owned. The artificial intelligence running the complex logistics apparatus makes for pretty boring days, but not today…

(Excerpt from a Threatcasting Possible Future)

Threatcasting East, August 2016 at USMA

- Emerging Threats
  - *Complex Systems' Vulnerabilities*
    - *Efficiency is easy to hack*
    - *Exploitation of the global supply chain*
  - *Weaponization of Data and Artificial Intelligence*

- Required Actions
  - *Need for Norms*
  - *Living in a New Reality*

A Widening Attack Plain

Threatcasting Report:
Army Cyber Institute

Brian David Johnson

with other participants

www.threatcasting.com

Threatcasting West, March 2017 at Arizona State University

- Emerging Threats
  - *AI Surveillance and Coercion: The New Dogs of War*
  - *The AI Weapons Factory*
  - *Careless Destabilization of National Security*

- Required Actions
  - *Further Research*
  - *Technical and Process Tools*
  - *Regulation and Oversight*

THE NEW DOGS OF WAR:
THE FUTURE OF WEAPONIZED ARTIFICIAL INTELLIGENCE

A Threatcasting Report from the
Army Cyber Institute at West Point and
Arizona State University's Threatcasting Lab

www.threatcasting.com

The Army Cyber Institute at WEST POINT

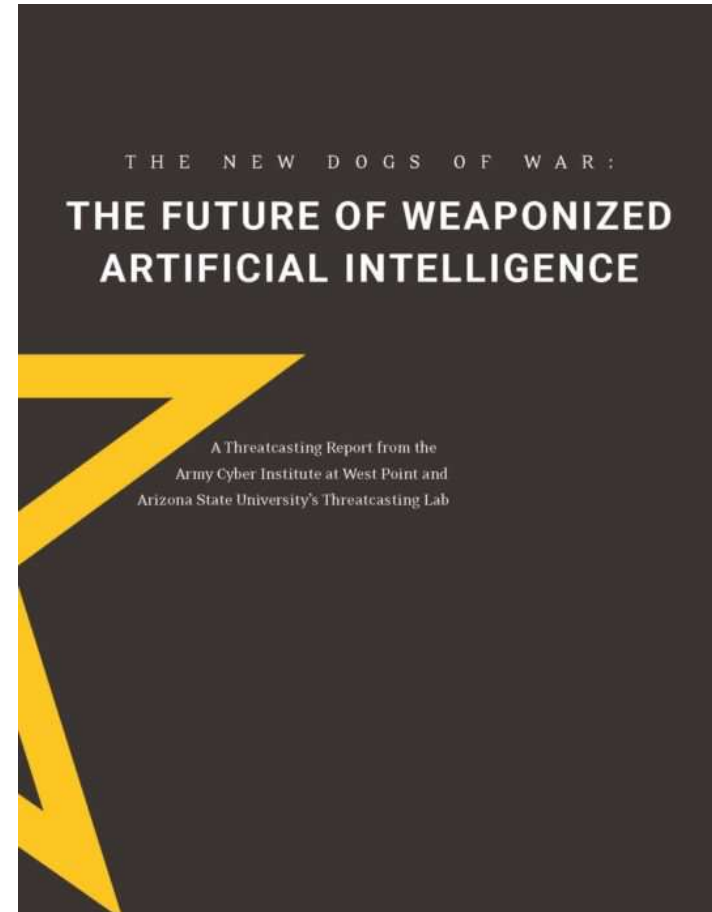## East, Aug '16 (USMA) – *A Widening Attack Plain*

- Threats:
  - *Complex Systems' Vulnerabilities*
    - ** Efficiency is easy to hack*
    - ** Exploitation of the global supply chain*
  - *Weaponization of Data and Artificial Intelligence*

- Actions:
  - *Need for Norms*
  - *Living in a New Reality*

West, Mar '17 (ASU) – *The New Dogs of War: The Future of Weaponized AI*

- Threats:
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THREATCASTING EAST | 2017
Save the Date: Sept 6-7, Washington DC

The year is 2027... The world depends on artificial intelligence and complex automated systems. The accumulation of power increases on the internet. Data can no longer be trusted.

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THREATCASTING WEST | 2018
Save the Date: Feb 27-28, Los Angeles

The attack plain widens beyond earth's atmosphere. Adversaries target satellites to cripple infrastructure, communications and banking systems. Cyber warfare is no longer the stuff of science fiction.

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The Army Cyber Institute

Intellectual Capital

STREET CRED

AARON BRANTLY

Cyber Fellow at West Point Combating Terrorism Center & Army Cyber Institute

ISIS TURNS TO TECH

CNBC

THE CYBER DEFENSE REVIEW

STRATEGY OPERATIONS TACTICS HISTORY ETHICS POLICY&LAW

Preventing Strategic Surprise

Research Initiatives:

- Cyber and Multi Domain Battle
- Cyber Leader Development Program
- Workforce Development and Retention
- Future Exercises, Simulations and Models
- The Future of Data and Data Centers

CyCon U.S.

International Conference on Cyber Conflict

2017

Impactful Partnerships

CYBER TALKS

DISRUPTIVE. CYBER. INNOVATION.

Fostering Innovation

"I don't need a robot army, I intend to use yours"

Professor Edward Sobiesk