The Influence Machine:
Hacking deterrence with automated IO.

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Photo credit: Hamilton68, http://dashboard.securingdemocracy.org/

Artificial Intelligence and Disruption

"Just as electricity transformed almost everything 100 years ago, today I actually have a hard time thinking of an industry that I don't think AI will transform in the next several years."

-Andrew Ng

- ✓ Physical autonomy
  - Swarming robots
  - Lethal Force
- ✓ Informational Optimization
  - Mission Command
  - Intelligence
  - Cybersecurity
  - Business Practices
- ❑ Cognitive Influence

AI-driven influence operations pose a more proximate *strategic* risk than similar applications of the technology to drones or optimization, though it is given none of the budgetary attention.

Automated Influence

The purposeful use of AI to monitor specific audiences and produce and distribute misleading information to them over digital media networks for the purposes of foreign security objectives.

"The Influence Machine:"

a convergence of three AI uses for IO

➢ Algorithmic content generation capacity
- • Narrative Science
- • Deepfakes

➢ Personalized targeting capability
- • Programmatic Marketing
- • Replika

➢ Firehose dissemination capacity
- • Internet Research Agency
- • The Users Themselves
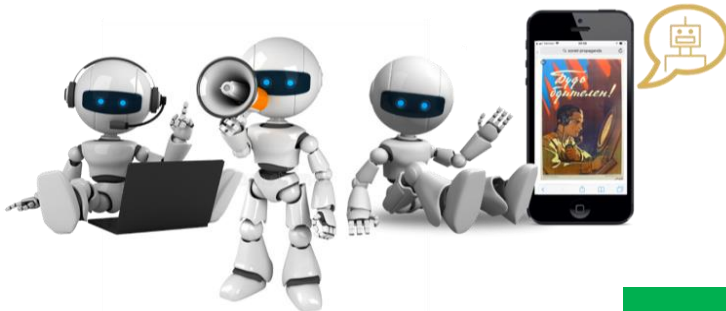
narrative science
How the future gets written

Replika
Reserve a name for your Replika and start growing your new best friend.
Reserve now

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Manufactured Influence

Protestant Precedent

- Consumable content (vernacular)

- Decentralized production

- Rapid distribution

➤ **Internecine bloodshed, culminating in the Thirty Years War, kept the Holy Roman Empire internally focused for 130 years.**

The Present

- Social Media… Arab Spring & vK

- Nigerians and Macedonians

- Blacktivist and HeartofTexas

- Reborn Active Measures

➤ **We've now seen computational propaganda in 13 countries on five continents.**

Linear Strategy, Exponential World

➢ Drones are in the news: Light Shows, Russians, & ISIS, oh my…

  …systems limited by Newtonian mechanics

➢ DoD is also looking for optimization in projects like MAVEN & Quantum

  …functional gains are linear

➢ The Influence machine has a strategic asymmetry
  • Supply chain
  • Distribution rate
  • Range
  • Attribution
  • Multiplying Weapons Effects…
    …exponential potential

➢ **Defeat Mechanism**
  • Clausewitz and the value of the object
  • Analogous to Strategic Bombing theory
  • Precluding a campaign before it is fought
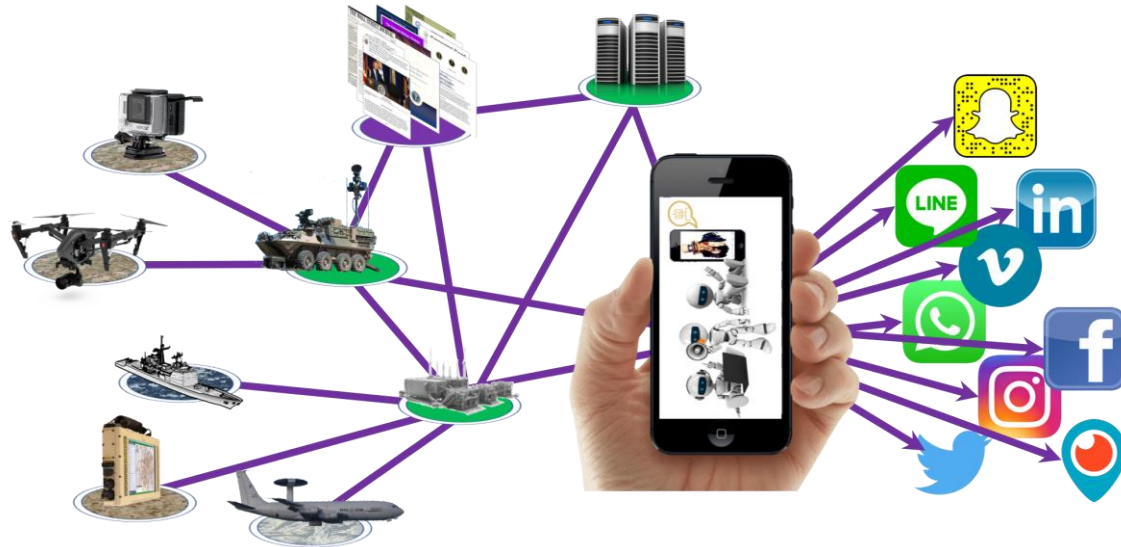

Linear vs Exponential Growth

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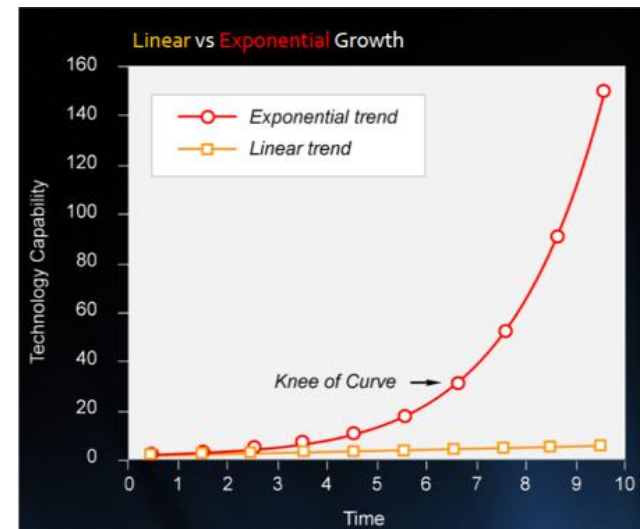
Solution Space

Moment of Opportunity:

- Joint Concept for Integrated Campaigning
- Information as a joint function
- Founding of JAIC

Ongoing efforts:

- DARPA & Oxford University
- Brookings & RAND
- Hamilton68 & FiveThirtyEight
- NATO StratComm CoE
- StopFake & Bellingcat

Needed change:

- Funding at a level commensurate with the threat
- Authoritative coordination body
- Innovative at the scale and speed of the problem…

Curate faster than they can lie: violent, but selective, transparency

- Image Processing for Tactical Video Feeds
- Narrative Science for Mission Command Data
- Chatbots to enable Public Affairs

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Conclusion

- Every person, online, is also within range of an Influence Machine.

- The exponential capacity of AI-driven influence operations pose a greater strategic risk than similar application of the technology.

- Though automated influence can't win a campaign, it may preclude a targeted democracy from fighting one.

- Regardless of competitor nation behaviors or USG response, private industry will drive this arms race, all while Google refuses to participate in AI warfare.

WORLD WAR I

WORLD WAR II

WORLD WAR III
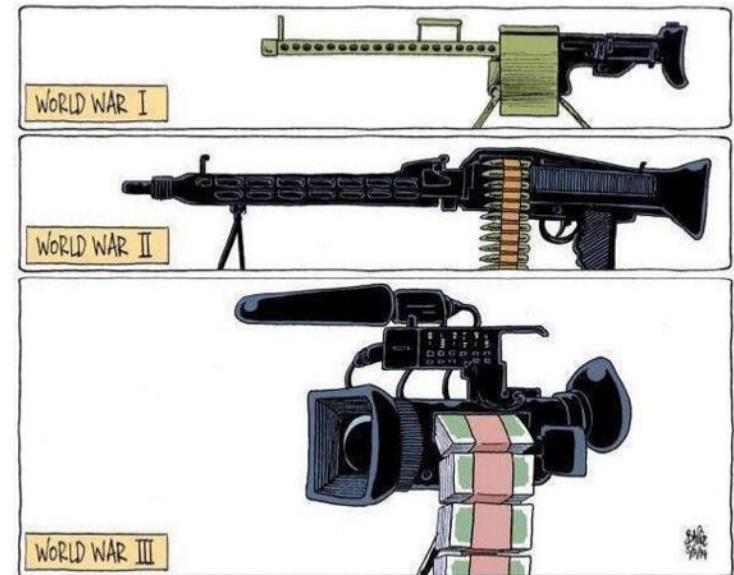
We need AI-driven influence solutions that can affect the disputed audience as virally as threat systems

Questions?

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