Identity, Trust & Data

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Does blockchain technology solve...

The Identity Problem

- The "quality" or "security" of a digital identity
- The relative "freedom" or independence of an identity from any given authority
- The source of trust for a digital identity

o Privacy

o Binding to real-world

o Attributes, reputations

o Provenance, trustworthiness

o Availability, persistence

o Auditability, non-repudiability, etc

The Data Problem

Anthem: Hacked Database Included 78.8 Million People

Health insurer says data breach affected up to 70 million Anthem members

Anthem disclosed earlier this month that hackers h information about 80 million customers and emplo

By ANNA WILDE MATHEWS
Feb. 24, 2015 2:49 p.m. ET

SONY PICTURES

Recent Hacking Incidents around the world

CREDIT CARDS & CUSTOMER INFO

HACKED

TARGET 40 million
customer accounts hacked

USA

27 NOV 2013   15 DEC 2013

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- Organizations are holding growing amounts of data
- Making them attractive to attacks
- Increasing their liabilities
- Impacting privacy of subjects & owners
- Ownership & sharing
- Metadata

The Trust Problem

- Technical trust vs Social trust

- Social trust today encoded as legal

- Legal Trust Framework defines "rules of the game" and resolves "exceptions"

- Standardization of LTF for identity & for data sharing

o "Trustless" not equivalent to "Trustworthy"

o Decentralization does not translate to trust

o Is "trust" a consensus problem

o Smart Contracts, human errors & contrivances

o Smart malware

The Privacy Problem

EU Data Protection Regulation

European Commission
Commission européenne
EU Data Protection Reform

ec.europa.eu

Gauging the allure of designer drugs *p. 469*

Science

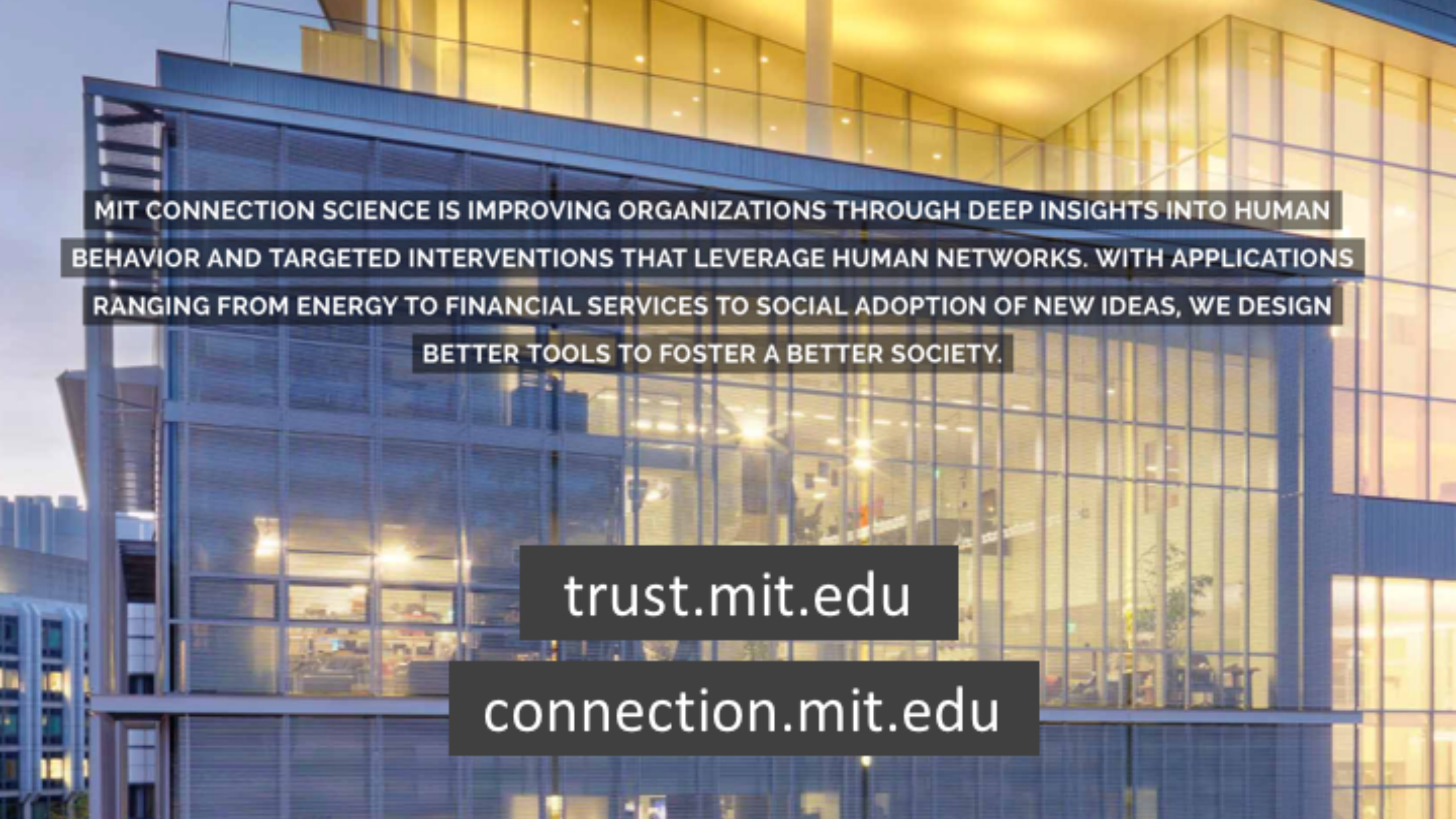$10
30 JANUARY 2015
sciencemag.org

AAAS

SPECIAL ISSUE

The End of

PRIVACY

- Data about human behavior has always been essential for both government and industry

- But how do we enable institutions to collect and analyze data without abusing that information

New Principles (OPAL):

1. **Never allow raw data to leave repo**

2. **Data encrypted at all times, at rest & in computation**

3. **Aggregate answers only**

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