

# The Ecosystem of Ethics & Support of Big Data

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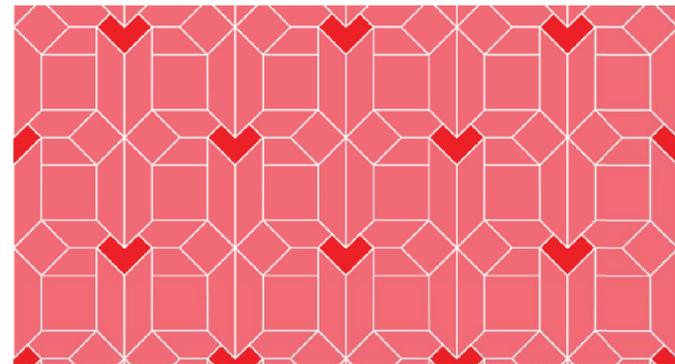


# Ethics in the News



MICHAEL ZIMMER SECURITY 05.14.16 7:00 AM

## OKCUPID STUDY REVEALS THE PERILS OF BIG-DATA SCIENCE



## Facebook fiasco: was Cornell's study of 'emotional contagion' an ethics breach?

A covert experiment to influence the emotions of more than 600,000 people. A major scientific journal behaving like a rabbit in the headlights. A university in a PR tailspin



Facebook have recently come under fire for a controversial psychological study. Photograph: Dave Thompson/PA



## Coming Soon: Ethics Training for Data Scientists

by Barb Darrow @gigabarb DECEMBER 4, 2015, 1:00 PM EST



THE CHRONICLE OF HIGHER EDUCATION

TECHNOLOGY

## Harvard Researchers Used Secret Cameras to Study Attendance. Was That Unethical?

By Rebecca Koenig and Steve Kolowich | NOVEMBER 06, 2014

A high-tech effort to study classroom attendance at Harvard University that used secret photo surveillance is raising questions about research ethics among the institution's faculty members. The controversy heated up on Tuesday night, when a computer-science professor, Harry R. Lewis, questioned the study at a faculty meeting.

During the study, which took place in the spring of 2013, cameras in 10 Harvard classrooms recorded one image per minute, and the photographs were scanned to determine which seats were filled.

To some professors, it was an obvious intrusion into their privacy—and their students'.



# Big Data



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Data & Fairness

The Future of  
Labor in a Data-  
Centric Society

Enabling  
Connected  
Learning

Ethics in “Big  
Data” Research

Intelligence and  
Autonomy

Data, Human  
Rights & Human  
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Council for Big Data, Ethics, and Society

Ethics in Research Data Project



# How can infrastructures that exist around technical researchers support the emerging ethical issues in big data research?

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danah boyd, Bonnie Tijerina & Emily F. Keller

Data & Society Research Institute



Alfred P. Sloan  
FOUNDATION



# Ethical Concerns

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- Data Collection



# Ethical Concerns

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- Data Collection
- Data Storage



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- Data Storage
- Data Sharing, Reuse, Replicability



# Ethical Concerns

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- Data Collection
- Data Storage
- Data Sharing, Reuse, Replicability
- Re-identification and Consent



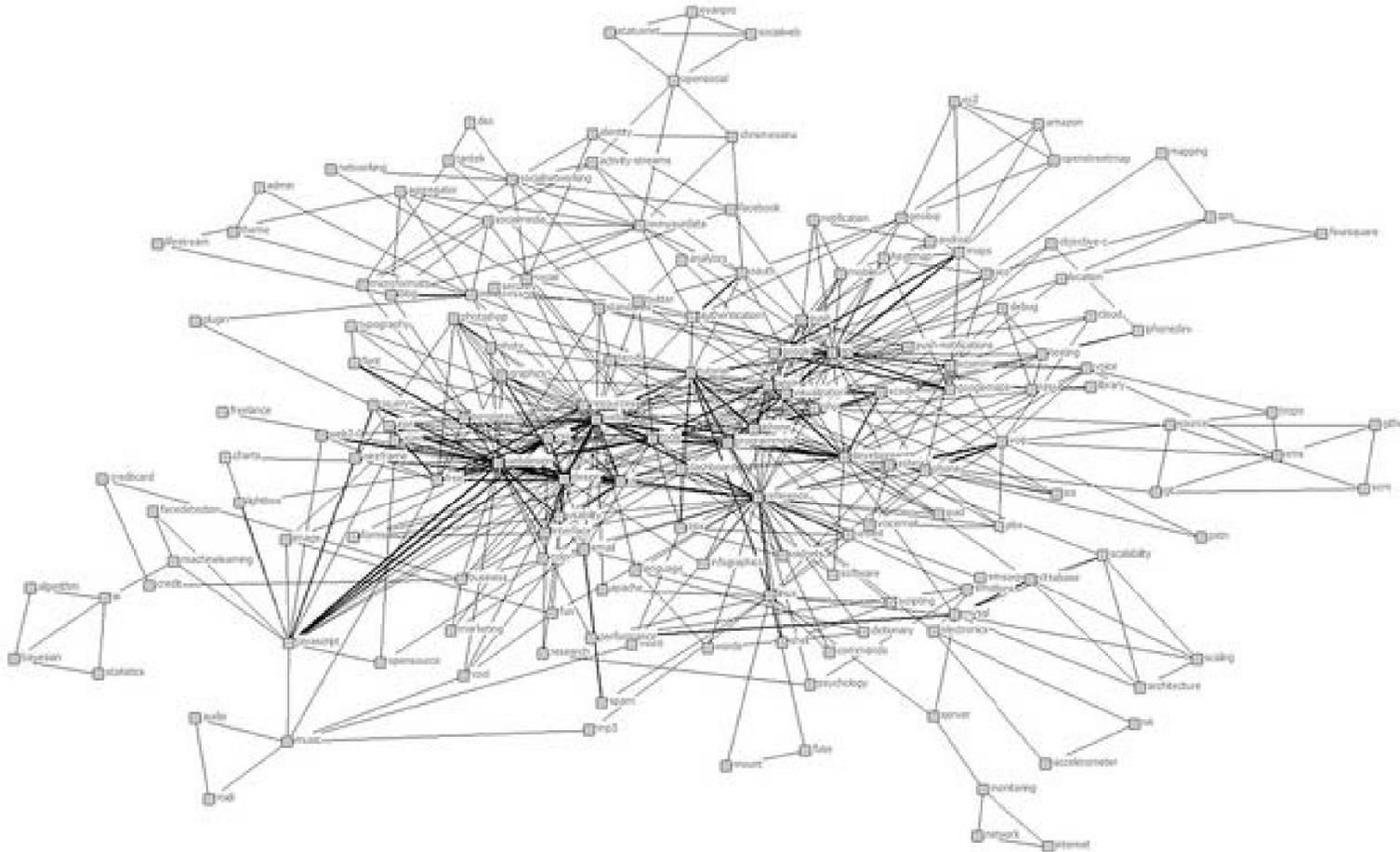
# Ethical Concerns

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- Data Collection
- Data Storage
- Data Sharing, Reuse, Replicability
- Re-identification and Consent
- Unknown and Emerging



# Formal Structures



- **IRB**
- **DMPs**
- **Requirements**



# Reframing Ethics

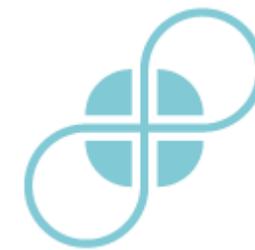
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## Definitions

- Violations
- Trustworthy
- Morality
- Conscience
- Mistakes
- Transparency
- Responsibility
- Protection
- Integrity
- Anonymity
- Accountability
- Responsibility
- Teaching
- Consent
- Objectivity
- Security



# On-Campus Workshop



# Exercise 1. Alice Exercise

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- How will Alice know how to write a DMP for her work? Where will she see what others have written?
- Who will teach her about how to navigate IRB? How will she learn how to create an appropriate protocol?
- How will Alice store and secure her data? Are there services on campus that she can turn to that will support her? What will she be expected to manage?
- How will she know which private services to use in her work? (e.g., Dropbox, AWS, Azure, etc.) Who helps her figure out the security and terms of service issues that might arise?
- Who will help her negotiate a contract with ImageCompany?
- Who will help her learn how to navigate Amazon Mechanical Turk's protocols and processes?
- Who can help her deal with best (technical and social) practices in scraping data or navigating data collection on Amazon Mechanical Turk?
- Who will help her understand how to assess the limitations and biases in her data sets?
- How can Alice get help with technical issues she's encountered? (Consider statistics questions, machine learning questions, etc. Imagine what happens when her advisor is too busy, lacks the expertise, or she's too afraid to ask.)
- Should her processes change depending on the social implications of her project? What if she's consulting for ImageCompany as part of getting access to the data?
- What are the questions Alice hasn't even thought of yet?



# RDM Services in Libraries

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- Triage Services
- Support of copyright and IP data issues
- Consultations on data-related skills
- Resource for questions on storage, data sharing, metadata preparation
- Discipline-specific data liaisons



# IRB & Ethics Safety Nets

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# Teaching Ethics

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- Apprenticeship
- Required click-through training
- Embedded ethical questioning
- Lecture series
- Case studies
- For-credit courses



**THANK YOU.**

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