Ethics - Areas of Difficulty

Bamberg Summer Institute in Computational Social Science

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Many thanks to Matthew Salganik for providing material for this lecture

Applying principles

Applying principles can be hard. Four areas of difficulty:

1. informed consent
2. informational risk
3. privacy
4. making decisions in the face of uncertainty

Applying principles

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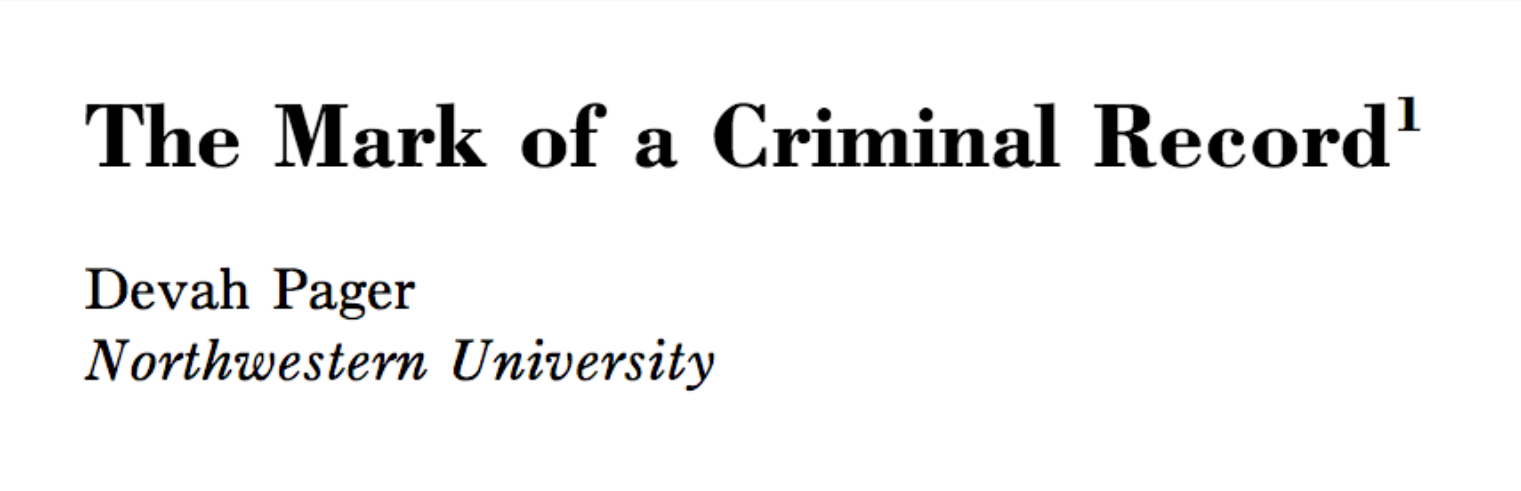
For each principle: (1) Simple idea, (2) Counter-example(s), (3) better idea, (4) advice

Informed consent

Informed consent

Simple idea: informed consent from all participants

Informed consent



The Mark of a Criminal Record[1]

Devah Pager
Northwestern University

http://www.jstor.org/stable/10.1086/374403

Field experiments to study discrimination, at least 117 studies in 17 countries (Riach and Rich, 2002; Rich 2014)

Informed consent

Principles-based argument

- the limited harm to the employers
- the great social benefit of having reliable measure of discrimination
- the weakness of other methods of measuring discrimination
- the fact that deception does not strongly violate the norms of that setting

Informed consent

Rules-based argument

- dozens of IRBs approved (probably based on Common Rule §46.116, part (d))
- US courts have also supported the lack of consent and use of deception in field experiments to measure discrimination (No. 81-3029. US Court of Appeals, 7th Circuit).

Informed consent

- simple idea: informed consent for all research
- actual rules and principles: some form of consent for most research

Informed consent

- is desire for consent motivated by respect for persons or beneficence? (think Encore)
- ideas for alternatives in Bit by Bit, Sec 6.6.1

Understanding and managing informational risk

Informational risk

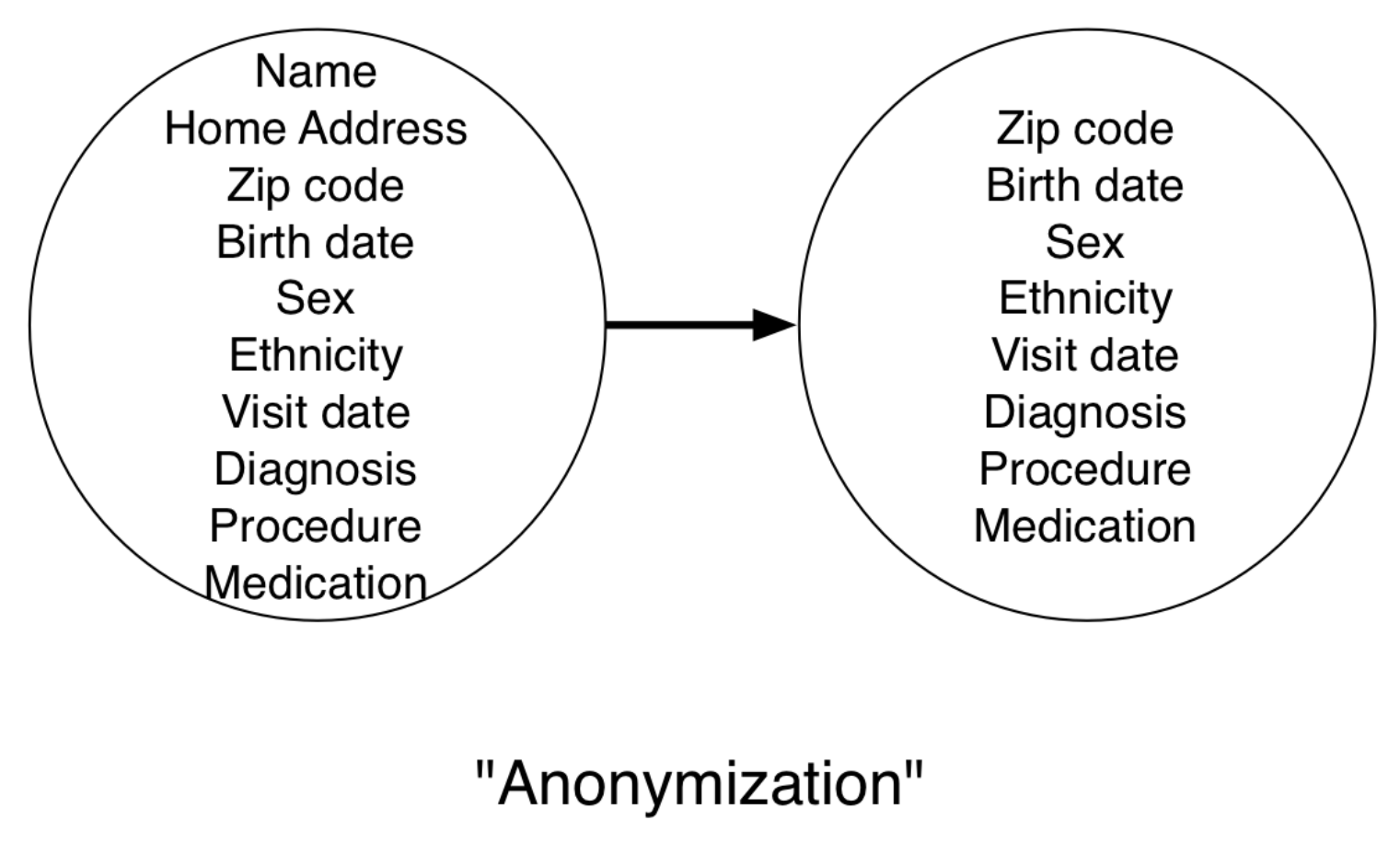
Biggest risk from much of computational social science is informational risk. Harms from the disclosure of personal information could be:

- economic (e.g., losing a job)
- social (e.g., embarrassment)
- psychological (e.g., depression)
- criminal (e.g., arrest for illegal behavior)

Informational risk

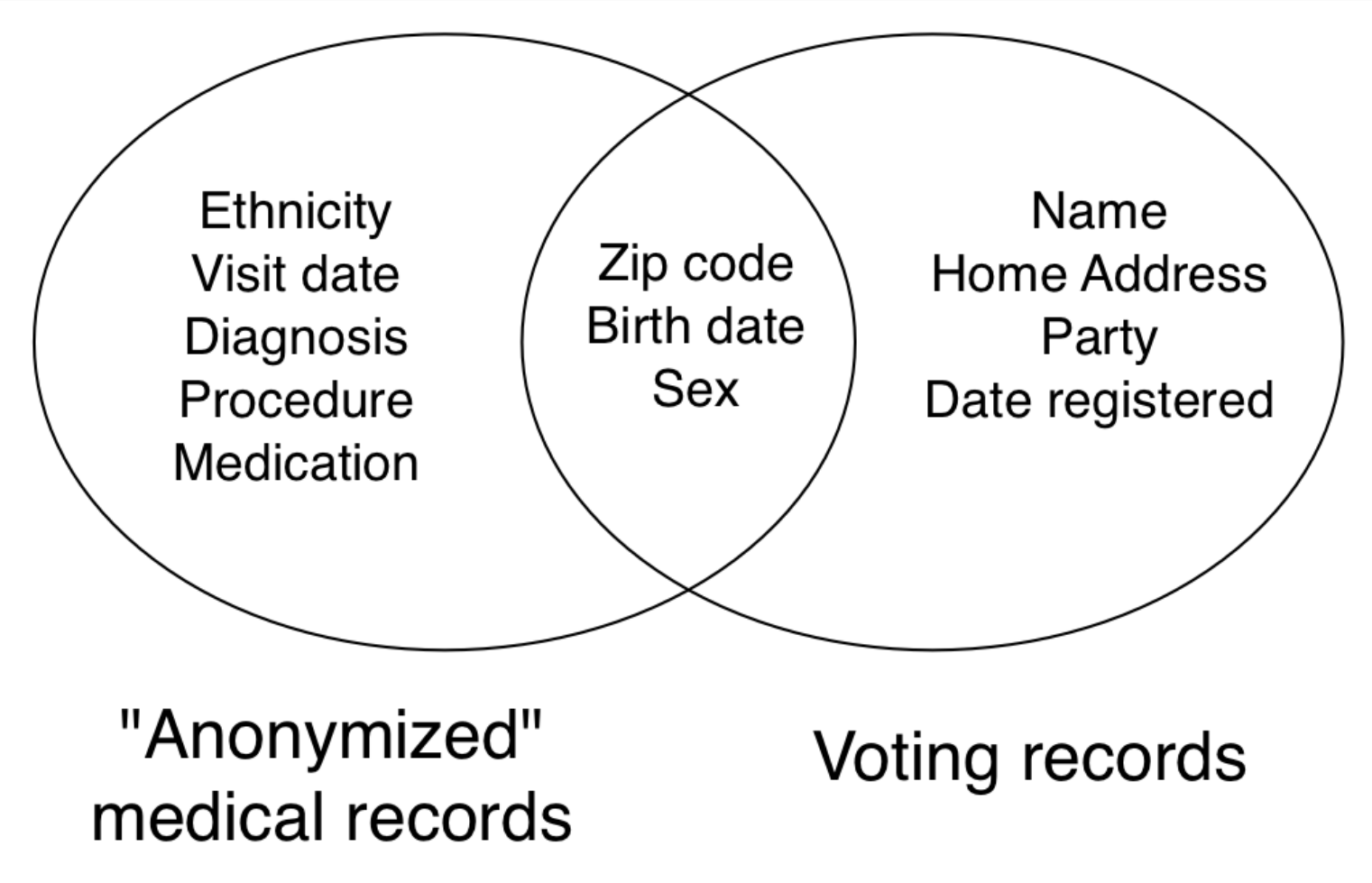
Simple idea: data can be made anonymous, and we can tell what data is sensitive

Informational risk



Sweeney (2002)

Informational risk



Sweeney (2002)

Informational risk

Risks come from combining data sources

$$\underbrace{\text{Baking soda}}_{\text{Safe}} + \underbrace{\text{Vinegar}}_{\text{Safe}} =$$

https://www.flickr.com/photos/edenpictures/15962352215/

Informational risk

- simple idea: data can be made anonymous, and we can tell what data is sensitive
- better idea: all data are potentially identifiable and all data are potentially sensitive

Informational risk

Robust De-anonymization of Large Sparse Datasets

Arvind Narayanan and Vitaly Shmatikov
The University of Texas at Austin

dx.doi.org/10.1109/SP.2008.33

Informational risk

RYAN SINGEL SECURITY 12.17.09 04:29 PM

NETFLIX SPILLED YOUR BROKEBACK MOUNTAIN SECRET, LAWSUIT CLAIMS

"[M]ovie and rating data contains information of a more highly personal and sensitive nature [sic]. The member's movie data exposes a Netflix member's personal interest and/or struggles with various highly personal issues, including sexuality, mental illness, recovery from alcoholism, and victimization from incest, physical abuse, domestic violence, adultery, and rape." (Singel, 2009)

Informational risk

"Five safes" data protection plan (Desai et al 2016):

- safe projects
- safe people
- safe data
- safe settings
- safe output

With a strong data protection plan most computational social science is minimal risk. More ideas in *Bit by Bit*, Sec 6.6.2

Privacy

Privacy

What is privacy?

Privacy

Simple idea: Public/private dichotomy

Privacy

Polit Behav (2010) 32:369–386
DOI 10.1007/s11109-010-9114-0

ORIGINAL PAPER

Affect, Social Pressure and Prosocial Motivation: Field Experimental Evidence of the Mobilizing Effects of Pride, Shame and Publicizing Voting Behavior

Costas Panagopoulos

http://www.jstor.org/stable/40960943

Privacy

WHO VOTES IS PUBLIC INFORMATION!

Dear registered voter:

On November 6, 2007, an election to select local leaders will be held in Ely, IA.

As a registered voter, you are eligible to vote in this election. We urge you to exercise your civic duty and vote on November 6th.

We also remind you that who votes is a matter of public record.

To promote participation in the election, we will obtain a complete list of registered voters who cast ballots on Election Day from local election officials. Shortly after the November 2007 election, we will publish in the local newspaper a complete list of all Ely registered voters who did not vote.

The names of those who took the time to vote will not appear on this list.

DO YOUR CIVIC DUTY! VOTE ON ELECTION DAY!

http://www.jstor.org/stable/40960943

Privacy

- simple idea: public/private dichotomy
- better idea: contextual integrity (Nissenbaum), think about flows of information

Privacy

Key idea is “context-relative informational norms”

- actors (subject, sender, recipient)
- attributes (types of information)
- transmission principles (constraints under which information flows)

Making decisions in the face of uncertainty

Uncertainty decisions

Simple idea: better be safe than sorry (“precautionary principle”)

Uncertainty decisions

Imagine a study similar to Emotional Contagion

- someone might be harmed by the experiment
- someone might be harmed if the experiment was not performed

There is no risk-free approach.

Uncertainty decisions

- simple idea: better safe than sorry (“precautionary principle”)

Uncertainty decisions

- simple idea: better safe than sorry (“precautionary principle”)
- better idea: there is no risk free approach, and we should not take a narrow-field of view.

For fuller elaboration, see Sunstein (2005) Laws of Fear: Beyond the Precautionary Principle

Ways forward

- minimal risk standard
- power analysis
- ethical-response surveys
- staged trials

For more details, see *Bit by Bit*, Sec 6.6.4

Recap

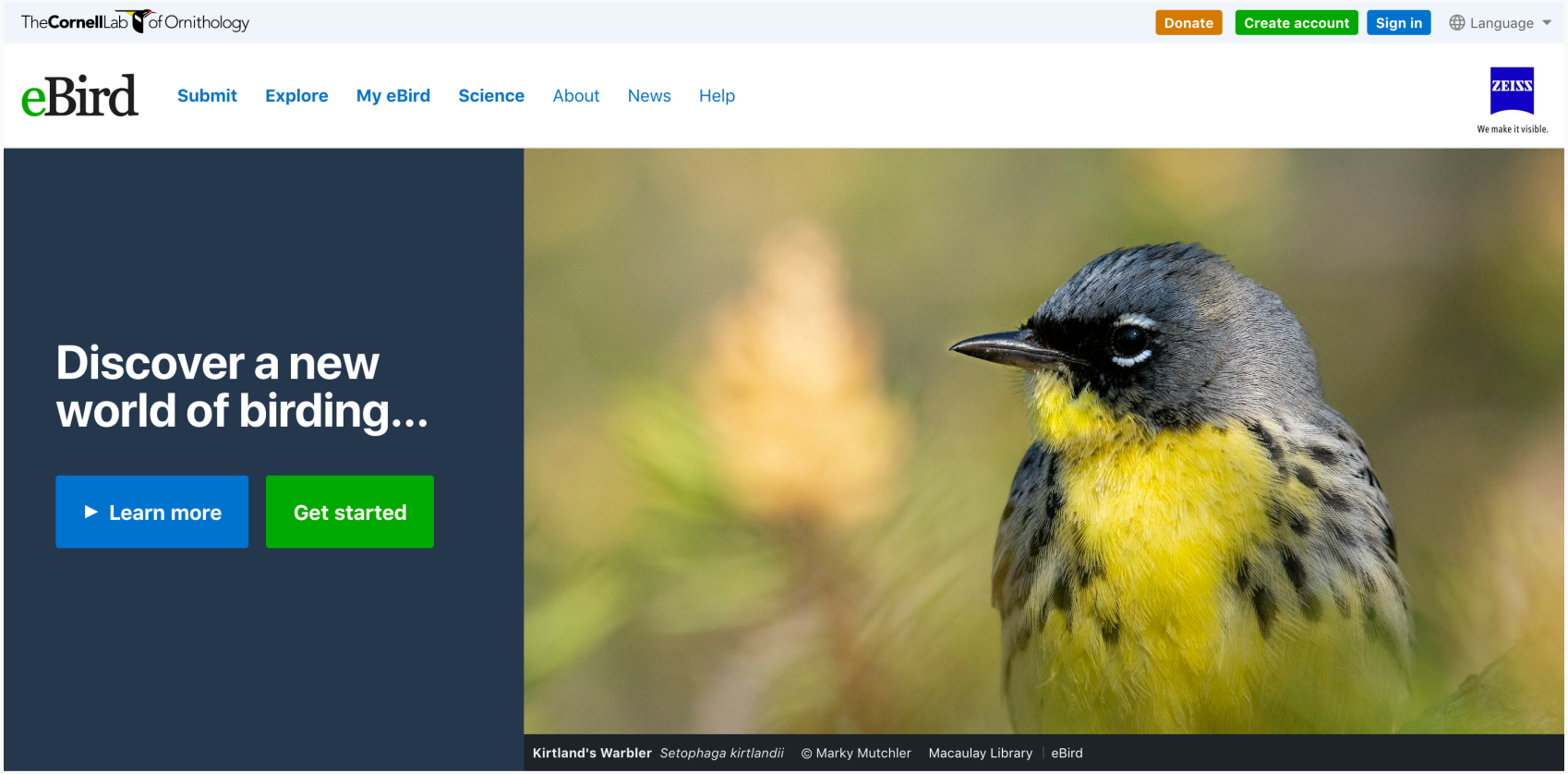
Four areas of difficulty:

1. informed consent
2. informational risk
3. privacy
4. making decisions in the face of uncertainty

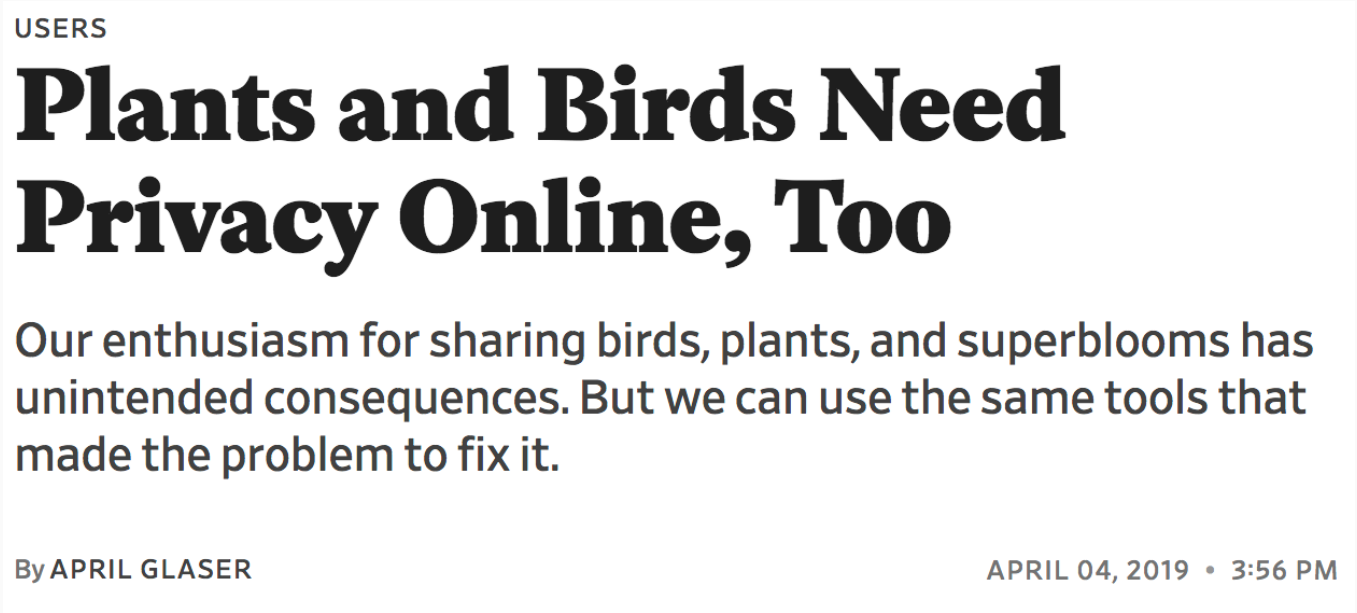
Unanticipated secondary uses

Unanticipated secondary uses

Fifth area of difficulty (not in Bit by Bit)



Unanticipated secondary uses



USERS

Plants and Birds Need Privacy Online, Too

Our enthusiasm for sharing birds, plants, and superblooms has unintended consequences. But we can use the same tools that made the problem to fix it.

By APRIL GLASER

APRIL 04, 2019 • 3:56 PM

https://slate.com/technology/2019/04/superbloom-california-nature-internet-collide-birds-poaching-science.html

Unanticipated secondary uses

Sensitive Species in eBird

eBird has recently been altered to better protect Sensitive Species, because **some bird species face risks including capture, targeted killing, or significant disturbance, and for these species eBird data output is restricted in some ways to protect them, while allowing important data to continue to come into eBird.**

https://help.ebird.org/customer/en/portal/articles/2885265-sensitive-species-in-ebird

Unanticipated secondary uses

- question: how would Lex Luther use this?
- requires adversarial thinking

Practical advice

- ethic committees are a floor not a ceiling
- put yourself in everyone else's shoes
- think of research ethics as continuous not discrete
- think of ethics as a research opportunity

Example: ethics as research opportunity

https://fatconference.org/

Next step

Your turn.

You will work in groups to analyze a real case and apply these ideas.

Questions?