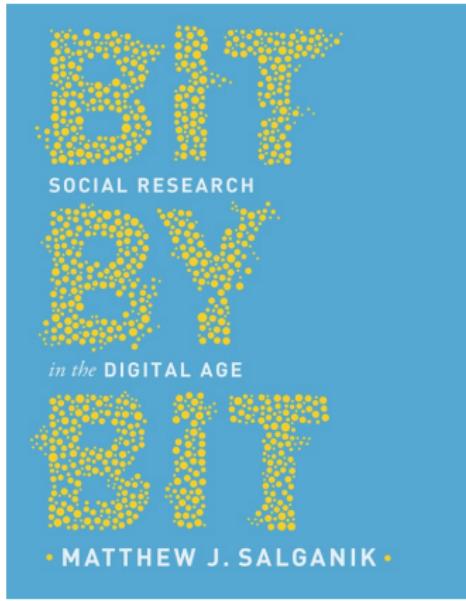


Ethics

Part 1, Part 2, Additions and extensions

Matthew J. Salganik
Department of Sociology
Princeton University





- 1) Introduction
 - 2) Observing behavior
 - 3) Asking questions
 - 4) Running experiments
 - 5) Mass collaboration
 - 6) Ethics
- Part 1, Part 2, [Additions and extensions](#)
- 7) The future

Ethics, part 1 and part 2

- ▶ Introduction
- ▶ Three examples
- ▶ Digital is different
- ▶ Four principles
- ▶ Two ethics frameworks
- ▶ Areas of difficulty
- ▶ Practical tips

Addition and extension 1 of 5: Respect for Law and Public Interest

Four principles:

- ▶ Respect for persons
- ▶ Beneficence
- ▶ Justice
- ▶ Respect for Law and Public Interest

Terms-of-service agreements

MapWatch: Detecting and Monitoring International Border Personalization on Online Maps

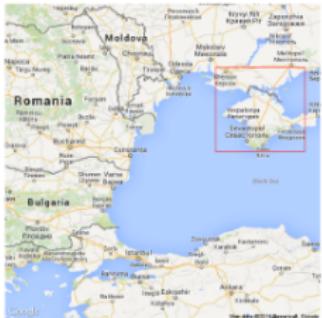
Gary Soeller
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Karrie Karahalios
University of Illinois at Urbana-Champaign
kkarahal@illinois.edu

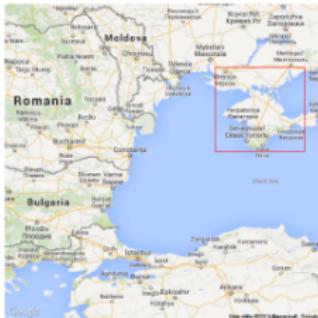
Christo Wilson
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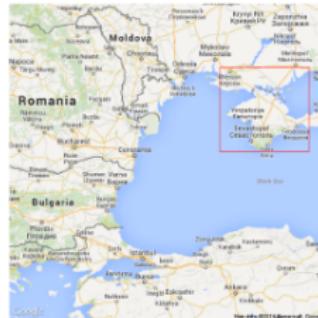
<http://dx.doi.org/10.1145/2872427.2883016>



(a) Russia



(b) Ukraine



(c) All countries except Russia and Ukraine

Figure 5: Border changes separating the Crimean Peninsula from Ukraine on Google Maps. Map Data ©2014 AutoNavi Google.

<http://dx.doi.org/10.1145/2872427.2883016>

Ethics. Many Web platforms discourage all automated crawling outside the API, and even within the API a platform may prohibit “research” in its online Terms of Service document (usually for competitive reasons). We agree with [57] that non-commercial research for the public good that deals with issues of societal importance must be able to access public Web resources for research purposes as long as automated processes do not produce an unreasonable load. This was our guiding philosophy in this research design.

<http://dx.doi.org/10.1145/2872427.2883016>

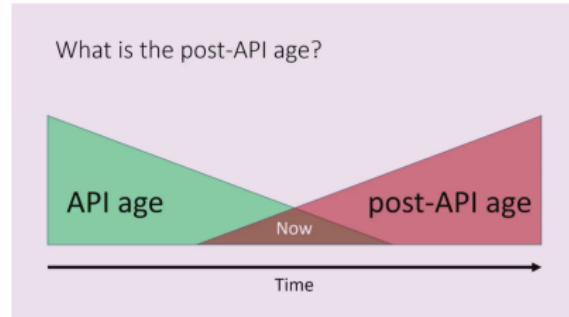
Researchers (with the support of the ACLU) have filed a case challenging the CFAA, Sandvig v Lynch:

[https://www.aclu.org/cases/
sandvig-v-lynch-challenge-cfaa-prohibition-uncovering-racial-discrimination-online](https://www.aclu.org/cases/sandvig-v-lynch-challenge-cfaa-prohibition-uncovering-racial-discrimination-online)

Even if this is legal should we do it?

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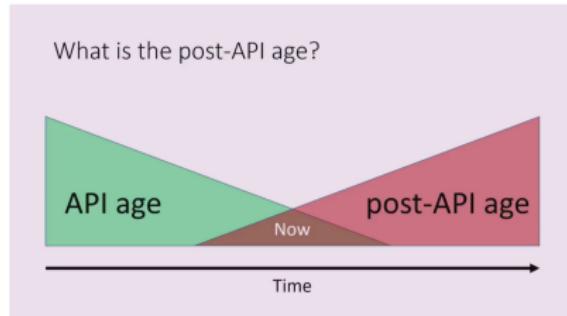
Deen Freelon at SICSS 2018: “[Surviving the post-API age](#)”



If you go “off the grid”:

Even if this is legal should we do it?

Deen Freelon at SICSS 2018: “[Surviving the post-API age](#)”

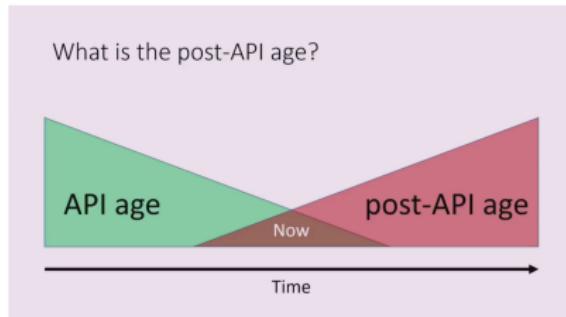


If you go “off the grid”:

- ▶ you might lose access to your data during your research

Even if this is legal should we do it?

Deen Freelon at SICSS 2018: “[Surviving the post-API age](#)”

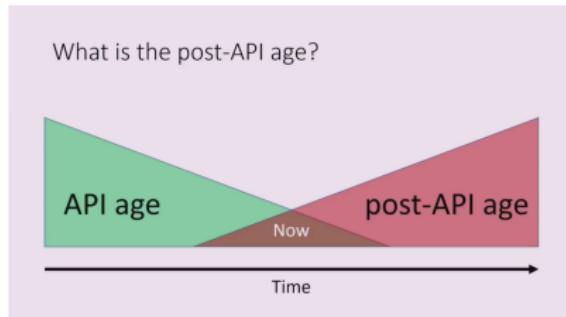


If you go “off the grid”:

- ▶ you might lose access to your data during your research
- ▶ you might struggle to have your research funded, talk about it, and publish it

Even if this is legal should we do it?

Deen Freelon at SICSS 2018: “[Surviving the post-API age](#)”

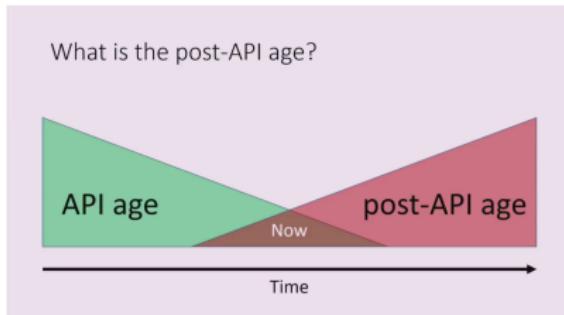


If you go “off the grid”:

- ▶ you might lose access to your data during your research
- ▶ you might struggle to have your research funded, talk about it, and publish it
- ▶ you might not be able to share your data with other researchers

Even if this is legal should we do it?

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If you go “off the grid”:

- ▶ you might lose access to your data during your research
- ▶ you might struggle to have your research funded, talk about it, and publish it
- ▶ you might not be able to share your data with other researchers
- ▶ you might make it harder to other academics in the future

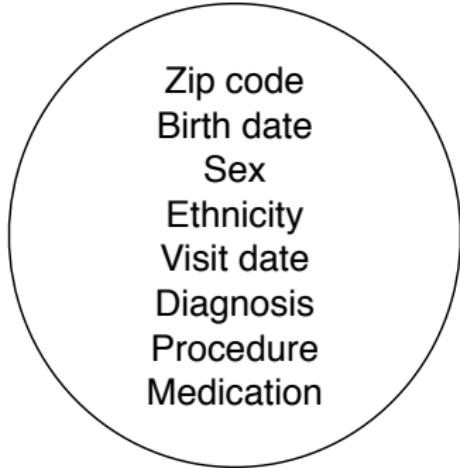
Addition and extension 2 of 5: Informational risk

Areas of difficulty:

1. Informed consent
2. Informational risk
3. Privacy
4. Making decisions in the face of uncertainty

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

- ▶ 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



- Zip code
- Birth date
- Sex
- Ethnicity
- Visit date
- Diagnosis
- Procedure
- Medication

De-identified
medical data

Sweeney (2002)

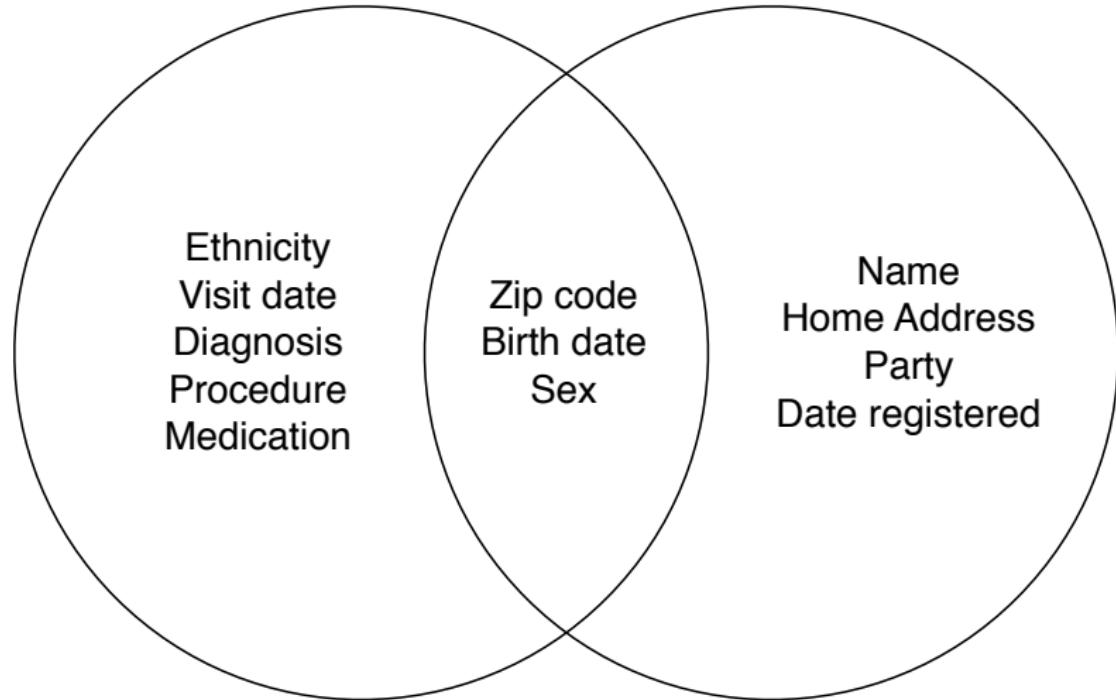
- Zip code
- Birth date
- Sex
- Ethnicity
- Visit date
- Diagnosis
- Procedure
- Medication

De-identified
medical data

- Name
- Home Address
- Zip code
- Birth date
- Sex
- Party
- Date registered

Voter registration data

Sweeney (2002)



Re-identified medical data

Aol.



4417749, “numb fingers”

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4417749, “60 single men”

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4417749, “60 single men”

4417749, “dog that urinates on everything”

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4417749, "60 single men"

4417749, "dog that urinates on everything"

4417749, "landscapers in Lilburn, Ga"

4417749, [several people with the last name Arnold]

4417749, "homes sold in shadow lake subdivision gwinnett county
georgia"

TECHNOLOGY

A Face Is Exposed for AOL Searcher No. 4417749

By MICHAEL BARBARO and TOM ZELLER Jr. AUG. 9, 2006

<https://www.nytimes.com/2006/08/09/technology/09aol.html>

Addition and extension 3 of 5: Fifth area of difficulty

Areas of difficulty:

1. Informed consent
2. Informational risk
3. Privacy
4. Making decisions in the face of uncertainty

Areas of difficulty:

1. Informed consent
2. Informational risk
3. Privacy
4. Making decisions in the face of uncertainty
5. Unanticipated secondary uses

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Kirtland's Warbler *Setophaga kirtlandii* © Marky Mutchler Macaulay Library eBird

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

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>



- ▶ How would Lex Luthor use this?
- ▶ This requires adversarial thinking.

https://en.wikipedia.org/wiki/Lex_Luthor#/media/File:LexLuthor1.png

Addition and extension 4 of 5: Practical tips

Practical tips:

- ▶ IRB is a floor not a ceiling
- ▶ Put yourself in everyone else's shoes
- ▶ Think of research ethics as continuous not discrete

Practical tips:

- ▶ IRB is 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

ACM Conference on Fairness, Accountability, and Transparency (ACM FAccT)

A computer science conference with a cross-disciplinary focus that brings together researchers and practitioners interested in fairness, accountability, and transparency in socio-technical systems.

<https://facctconference.org/>

Addition and extension 5 of 5: Think of ethics as a research opportunity, case study

Privacy, ethics, and data access: A case study of the Fragile Families Challenge*

Ian Lundberg^a, Arvind Narayanan^b, Karen Levy^c, and Matthew J. Salganik^a

In press at *Socius*, pre-print:

<https://arxiv.org/abs/1809.00103>

"Stewards of social science data face a fundamental tension. On one hand, they want to make their data accessible to as many researchers as possible to facilitate new discoveries. At the same time, they want to restrict access to their data as much as possible in order to protect the people represented in the data. In this paper, we provide a case study addressing this common tension in an uncommon setting: the Fragile Families Challenge, a scientific mass collaboration designed to yield insights that could improve the lives of disadvantaged children in the United States. We describe our process of threat modeling, threat mitigation, and third-party guidance. We also describe the ethical principles that formed the basis of our process. We are open about our process and the trade-offs that we made in the hopes that others can improve on what we have done."

In press at *Socius*, pre-print:

<https://arxiv.org/abs/1809.00103>

Ethics, part 1 and part 2

- ▶ Introduction
- ▶ Three examples
- ▶ Digital is different
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Additions and extensions

- ▶ 1 of 5: Respect for Law and Public Interest
- ▶ 2 of 5: Informational risk
- ▶ 3 of 5: Fifth area of difficulty
- ▶ 4 of 5: Practical tips
- ▶ 5 of 5: Think of ethics as a research opportunity, case study

Thank you