Data Agency Theory: A Precise Theory of Justice for AI Applications

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Overview

1. Why do we need a precise theory of AI justice?
2. What even is a theory of justice?
3. Building out Data Agency Theory (DAT)
4. DAT as an evaluative theory
5. DAT as a generative theory
6. DAT for researcher reflection

TECHNOLOGY

Suicide hotline shares data with for-profit spinoff, raising ethical questions

The Crisis Text Line's AI-driven chat service has gathered troves of data from its conversations with people suffering life's toughest situations.

This is an egregious ethics violation

"These are people at their worst moments. Using that data to help other people is one thing, but commercializing it just seems like a real ethical line for a nonprofit to cross."

- Jennifer King (Privacy & data fellow)

The ethics line was blurry

*"We **now** understand that you don't want Crisis Text Line to share any data, even though the data is handled securely, anonymized and scrubbed of personally identifiable information"*

- CTL Public statement

Though imperfect, data sharing is the cost of having free technologies

What if we paid for Facebook — instead of letting it spy on us for free?



Perspective by Geoffrey A. Fowler
Columnist | + Follow

April 5, 2018 at 12:32 p.m. EDT

Data practices currently rely on implicit intuitions of right and wrong

Ethics

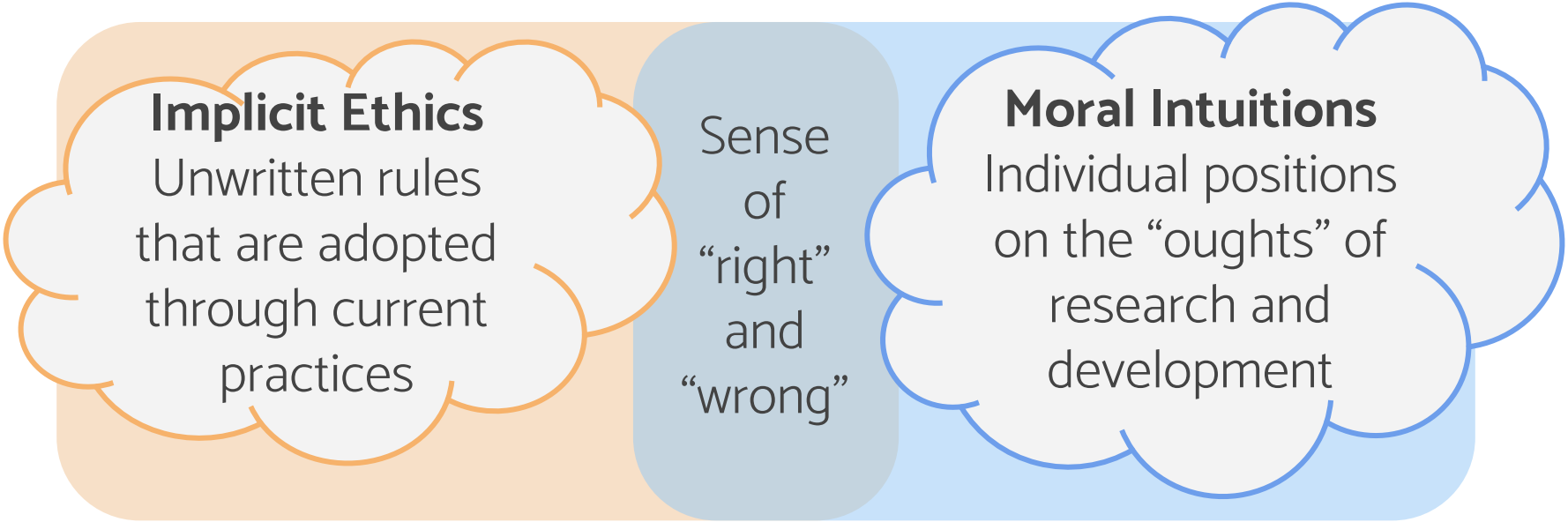
External rules on how to behave

Sense of "right" and "wrong"

Morals

Internal "compass" that calibrates how we move through world

Data practices currently rely on implicit intuitions of right and wrong



As ML/AI technologies need more and more data, is this an imprecision we're okay with?

As ML/AI technologies need more and more data, is this an imprecision we're okay with?

The price here is justice—our ability to give everyone their due right.

What is justice in an AI setting?

Giving everyone their due **data rights**

What is justice in an AI setting?

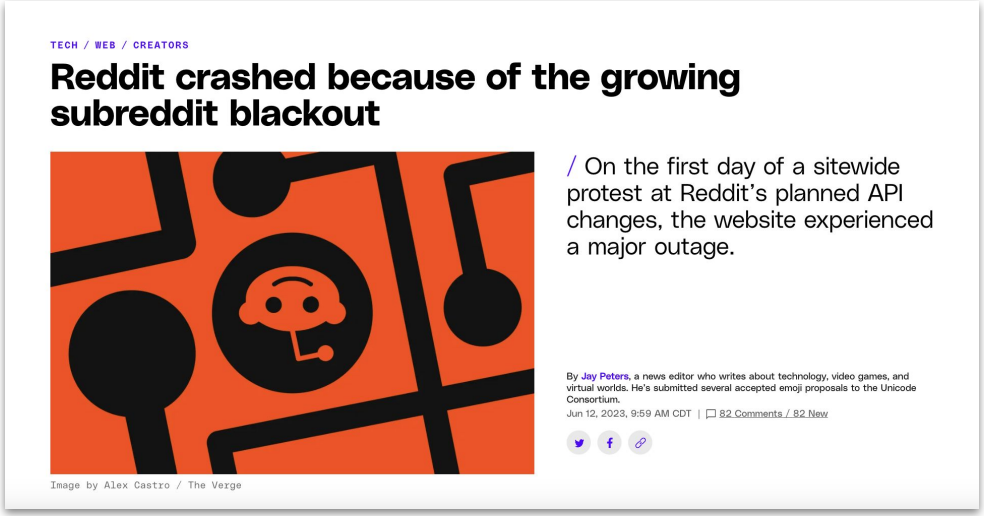
Giving everyone their due **data agency**

Data agency.
One's capacity to shape action around their data

Examples of Data Agency

Data Leverage (Vincent et al.)

The influence that members of the public have over tech companies

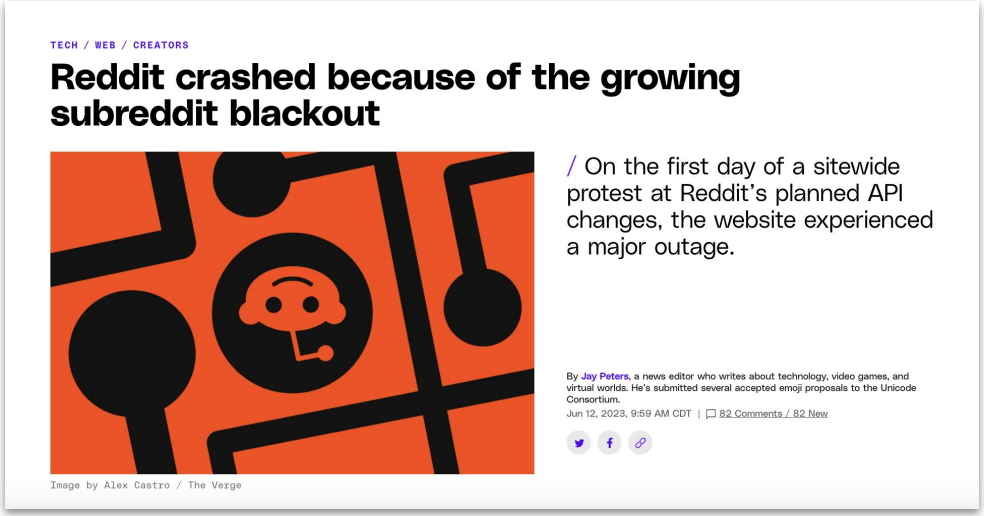


Examples of Data Agency

Data Leverage (Vincent et al.)

The influence that members of the public have over tech companies

- **Adversarial**
- **Subversive**



TECH / WEB / CREATORS

Reddit crashed because of the growing subreddit blackout

/ On the first day of a sitewide protest at Reddit's planned API changes, the website experienced a major outage.

By Jay Peters, a news editor who writes about technology, video games, and virtual worlds. He's submitted several accepted emoji proposals to the Unicode Consortium.

Jun 12, 2023, 9:59 AM CDT | 82 Comments / 82 New

Image by Alex Castro / The Verge

What is a theory of justice in an AI setting?

*"A **theory** however elegant and economical must be rejected or revised if it is untrue....*

*likewise laws and institutions must be reformed or abolished if they are **unjust**."*

- John Rawls, A Theory of Justice

What is a theory of justice in an AI setting?

"A theory however elegant and economical must be rejected or revised if it is untrue; likewise laws and institutions no matter how efficient and well-arranged must be reformed or abolished if they are unjust."

- John Rawls

1. Appropriately represent the state of the world
2. Articulate societal values
3. Inform future change for institutional processes

When we have a true theory of justice...

1. Don't defer to **subjective moral intuitions**
2. **Shared understanding** of right and wrong
3. **Ethical baseline** for building institutions and policies

Data Agency Theory

Premise 1.
Consent outlines agency in an institutionalized way

- Agreement set by the entity of power (e.g., tech company)
- No mechanism of negotiation
- Take actions away from data contributors as a group

Data Agency Theory

Premise 2.
This institutional and group-based way of outlining data agency is a matter of justice

- Iris Young's theory of justice

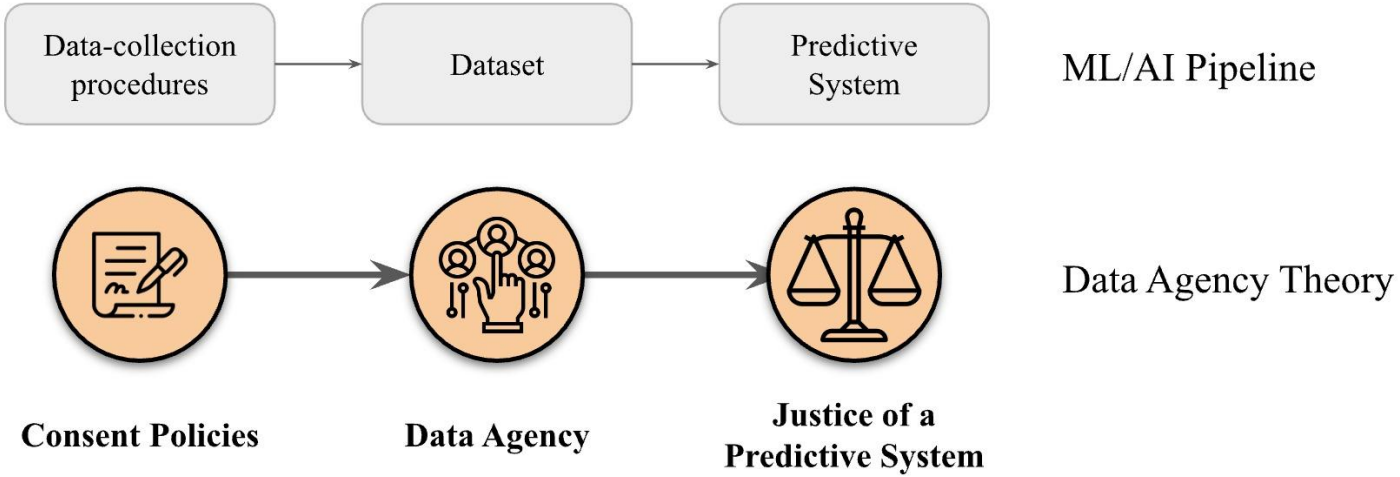
Injustice is when institutional routines cause group-based oppression

Data Agency Theory

Justice in a predictive system demands considering how **institutional routines** (i.e., consent procedures) transform **agency** at a group level

Data Agency Theory

Data agency is a *contributor to* justice and a *product of* consent policies in a predictive system



What does Data Agency Theory give us?

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Consent procedures that take data agency away from users are not just moral imperfections

What does Data Agency Theory give us?

Consent procedures that take data agency away from users are not just moral imperfections

They are injustice

Uses for Data Agency Theory



Comparative Framework
Evaluate multiple consent policies



Designing for Agency
Generate mechanisms throughout the data pipeline



Research Ethics
Paradigm shift towards social justice (non-outcome based)

Thank you!

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Pdf of paper at
leahajmani.com
Blog summary:
grouplens.org/blog

Data Agency Theory for



Comparing consent procedures



Designing for agency



Progressing research ethics