

Who Holds Power in Technology?

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Course Information

General Info

- The course combines **theoretical discussions**, **case studies**, and **hands-on activities** to rethink the relationship between **technology** and **society**.
- **4 ECTS** (equivalent to 106 hours).

Intended Learning Outcomes (ILO)

- ILO 1: Develop understanding on feminist perspectives on technology.
- ILO 2: Critically engage with how power, invisible labor, and bias shape the digital world.

The Course Structure

- **Four** modules, each focused on a specific objective
- **Two** group activities
- **One** panel discussion
- **3-Day** workshop
- Final **project**

The Course Four Sessions

- Who holds **power** in technology?
- The **invisible labor** behind technology
- Rethinking design-tech **beyond binaries**
- **Tech activism** and building feminist futures

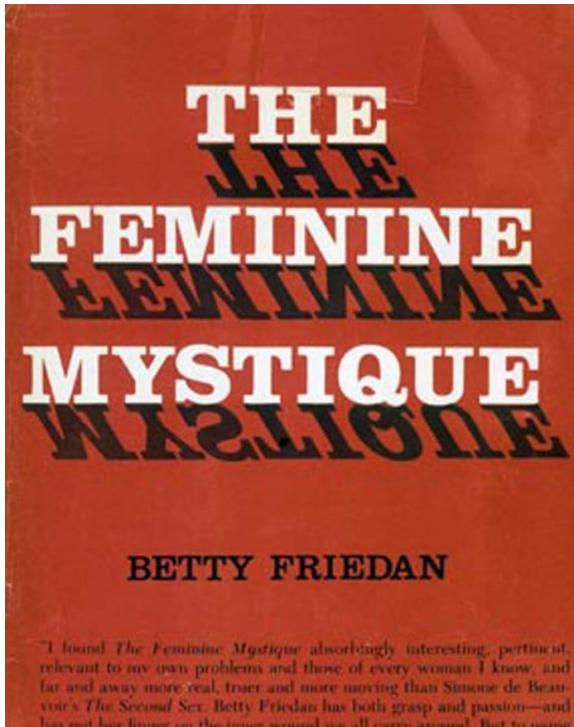


What is Feminism?



<https://hyenainpetticoatsblog.wordpress.com/>

The Feminine Mystique - Betty Friedan



Lean In - Sheryl Sandberg



LEAN IN
WOMEN, WORK, AND
THE WILL TO LEAD

SHERYL SANDBERG

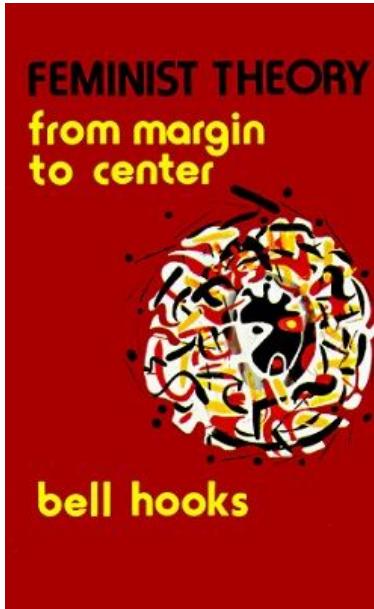
THE INTERNATIONAL BESTSELLER

Cracking the Glass Ceiling



<https://tinyurl.com/2ebjvy75>

Feminist Theory From Margin to Center - bell hooks



<https://tinyurl.com/2n2bsa2e>

The screenshot shows a web page from 'the feministwire'. The header features the site's name in red and grey. A navigation bar below it includes links for HOME, CATEGORIES, SUBMISSIONS, COMMENT POLICY, CONTACT US, and BOOKING. The main content area has a sub-header 'Home / Culture / Dig Deep: Beyond Lean In'. The main title 'Dig Deep: Beyond Lean In' is in large, bold, black font. Below it, a byline reads 'By Guest Contributor on October 28, 2013'. There are social sharing buttons for Facebook, Twitter, Pinterest, and Google+, along with a link to 145 COMMENTS. A sidebar on the left lists 'By bell hooks'. To the right, there is a small image of a book cover for 'LEAN IN' by Sheryl Sandberg and a photograph of Sheryl Sandberg's legs in high-heeled shoes. A text box contains an 'Editors' Note' about Sandberg's return to neoliberal feminism.

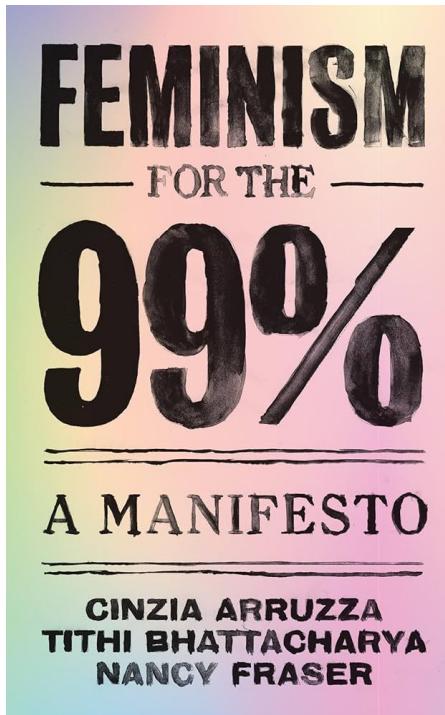
Editors' Note: Though some of the fanfare surrounding Sheryl Sandberg (of Facebook and *Lean In* fame) has died down, Sandberg is back with her neoliberal feminism, or what bell hooks describes below as "faux feminism." After weeks of traveling the nation hawking books (and thousands upon thousands sold), amid endless celebration, debate, and criticism, Sandberg and her corporate feminism seek to cover even more territory. Sadly, we now know where: just this week, Sandberg

Spanish Women's Strike - 8 March 2018



<https://tinyurl.com/3rkpsd29>

Feminism for the 99%: A Manifesto - Nancy Fraser



<https://tinyurl.com/ybsu5t9p>

Opposing Paths!

- These two voices represent opposing paths for the feminist movement.
- Traditional feminism: focuses on individual women's advancement within the existing system.
- Nancy Fraser: “We have no interest in breaking the glass ceiling while leaving the vast majority to clean up the shards”.



Generated by ChatGPT

Intersectionality - Kimberlé Crenshaw



<https://tinyurl.com/2p965ms9>

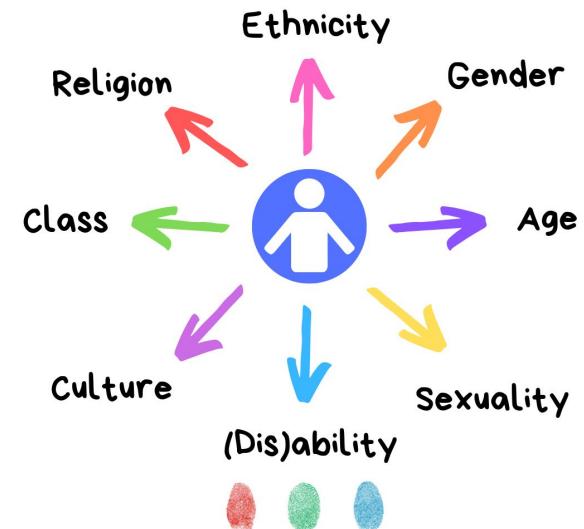


<https://tinyurl.com/2nmsfm85>

Intersectionality

Intersectionality describes:

1. Positionalities as the intersecting aspects of any particular person's identity
2. Intersecting forces of privilege and oppression at work in society.



<https://tinyurl.com/aedaa2h4>

What is Data Feminism?

What is Data Feminism?

- It is **not only about women**.
- It is **not only for women**.
- It is **not only about gender**.



What is Data Feminism?

- It is a way of thinking about **data**, both their **uses** and their **limits**, that is informed by **direct experience**, by a **commitment to action**, and by **intersectional feminist thought**.



<http://datafeminism.io/blog/book/data-feminism-infographic/>

Data Feminism and Power

- Data feminism is about power.
- Data is a form of power.
- Power is not distributed equally in the world.



Data Feminism and Data Science

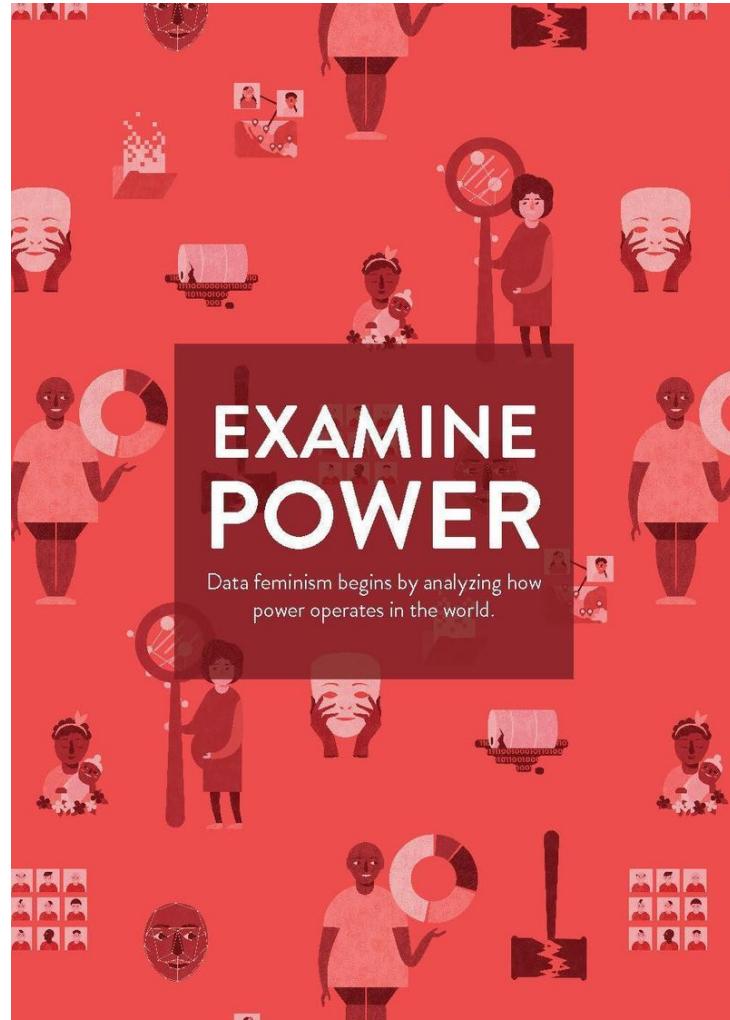
- Show how **standard data science practices reinforce** existing inequalities.
- How to use **data science** to **challenge** and **change** the **distribution of power**.



Metrics of Success

- Extend **beyond** the precision of a classification or **efficiency** of algorithms
- How much **trust** was built?
- How effectively the power and resources are **shared?**
- How much **learning** happened in both directions?
- And so on ...





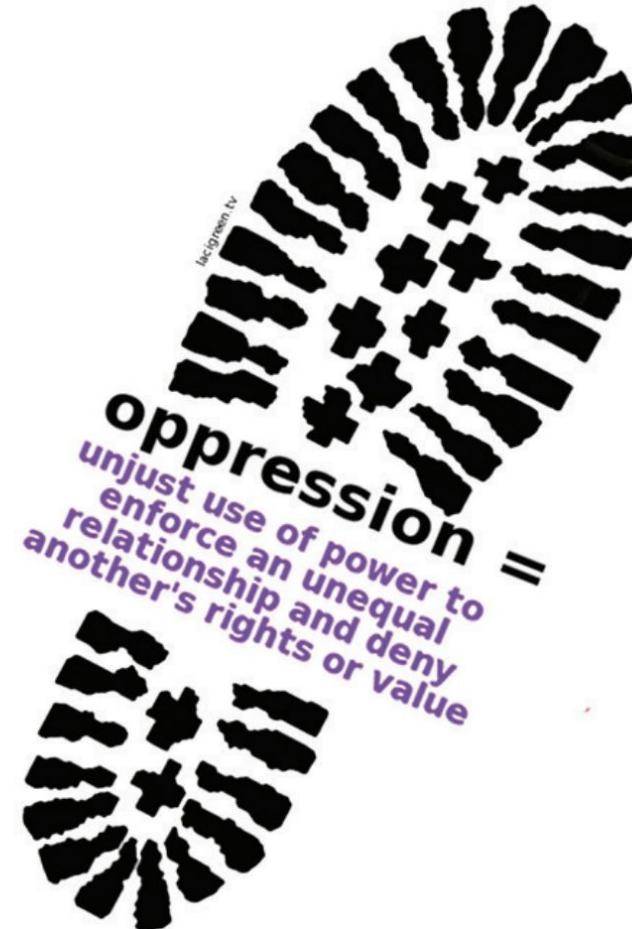
What is Power?

- Structural privilege and structural oppression



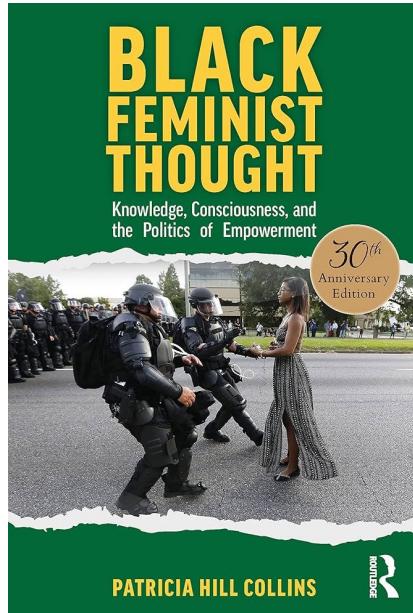
Examine Power

- Naming and explaining the **forces of oppression** that are so baked into our **daily lives** that we often don't even see them.
- In our **datasets**, our **databases**, and our **algorithms**



Black Feminist Thought - Patricia Hill Collins

- **Matrix of Domination:** four interrelated domains that organize power relations in society.



<https://tinyurl.com/y2k3prkj>

Matrix of Domination

The Four Domains of the Matrix of Domination

Structural domain
Organizes oppression: laws and policies.

Disciplinary domain
Administers and manages oppression. Implements and enforces laws and policies.

Hegemonic domain
Circulates oppressive ideas: culture and media.

Interpersonal domain
Individual experiences of oppression.

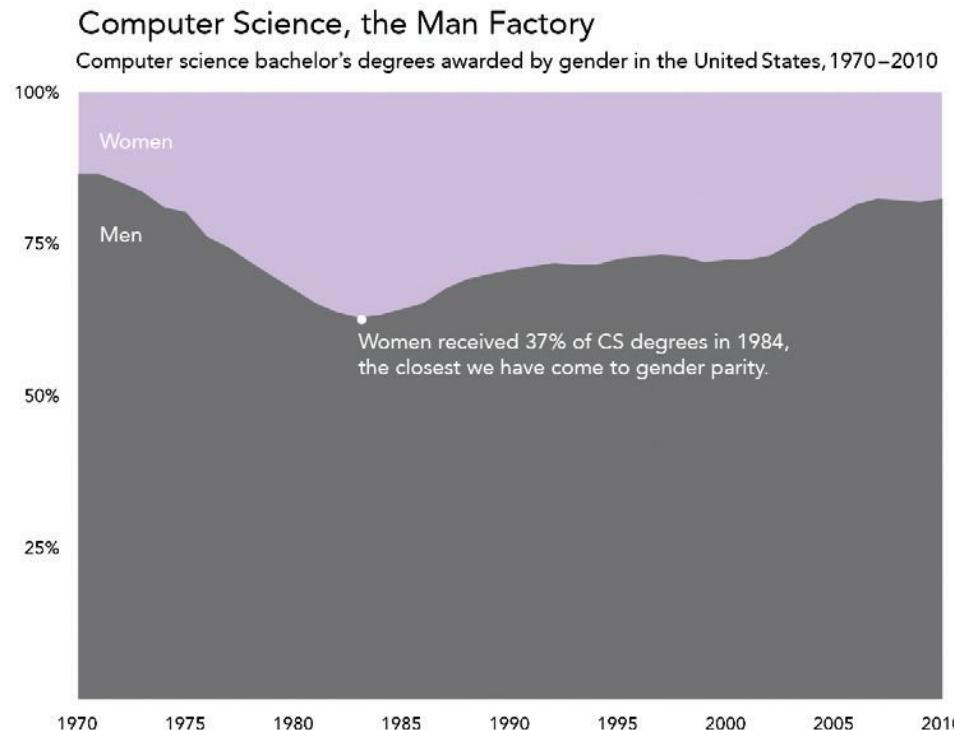
Who Questions

- Data science by whom?
- Data science for whom?
- Data science with whose interests and goals?



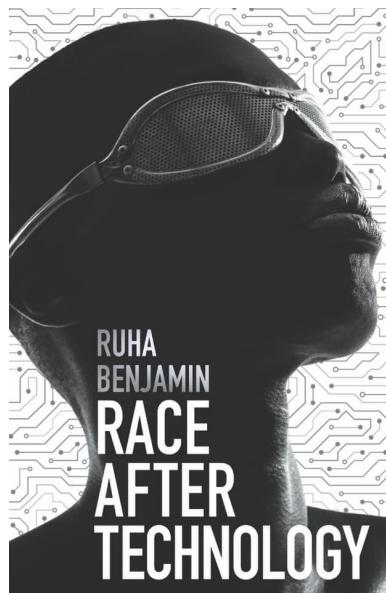
Data Science by Whom?

Data Science by Whom?



Race After Technology - Ruha Benjamin

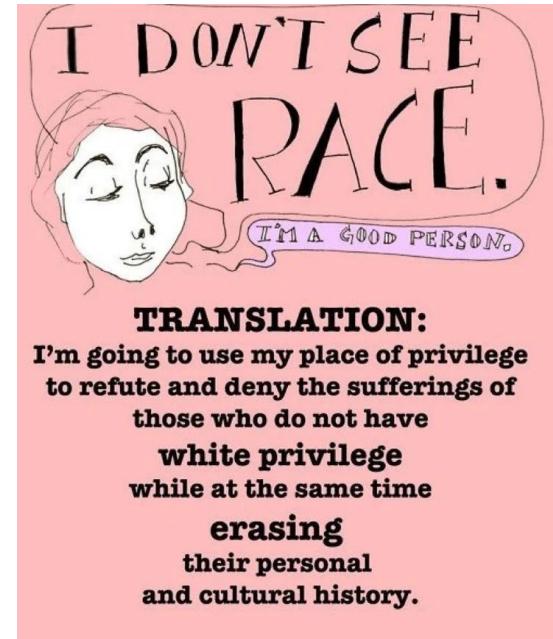
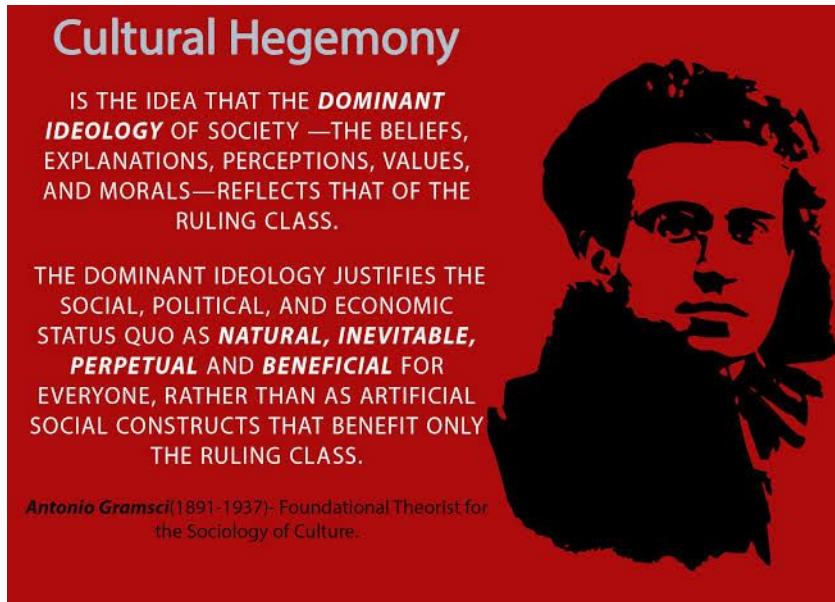
- **New Jim Code:** the combination of **coded bias** and **imagined objectivity**.



<https://tinyurl.com/5zjv4p8p>

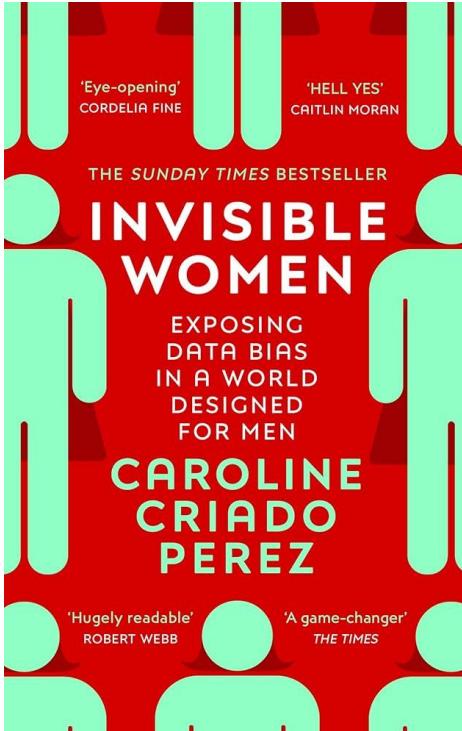
Privilege Hazard

- The idea that those **in the positions** to make decisions about, are **unaware** of the **potential harms**.



Data Science for Whom?

Invisible Women - Caroline Criado Perez



<https://tinyurl.com/25fyrz4s>

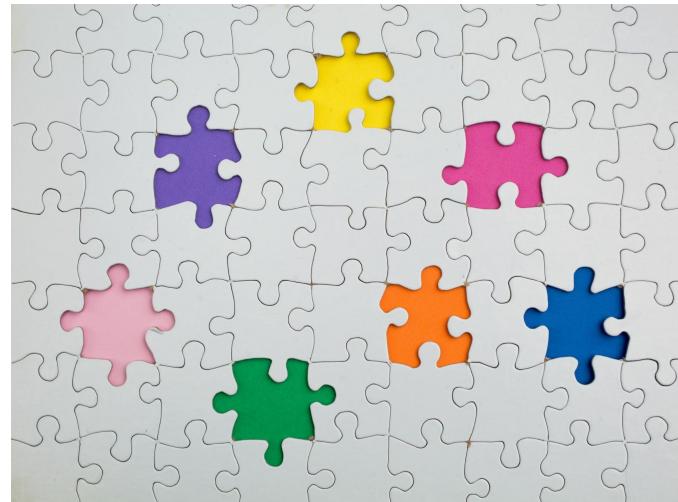
Invisible Women - Caroline Criado Perez

- **Healthcare and medical research**
 - Women underrepresented in clinical trials, leading to biased treatments.
- **Urban planning and public transportation**
 - Systems designed for male commuting patterns, neglecting women's needs.
- **Workplace design**
 - Office temperatures set for men, personal protective equipments often ill-fitting for women.
- **Crash test dummies**
 - Safety testing primarily based on male bodies, increasing risk for women.
- **Smartphone design**
 - Devices sized for male hands, making them less user-friendly for women.



Data Science for Whom?

- Effects of the **privilege hazard**: not only that datasets are **biased** or **unrepresentative**, but that they **never get collected at all**.



Data Science with Whose Interests and Goals?

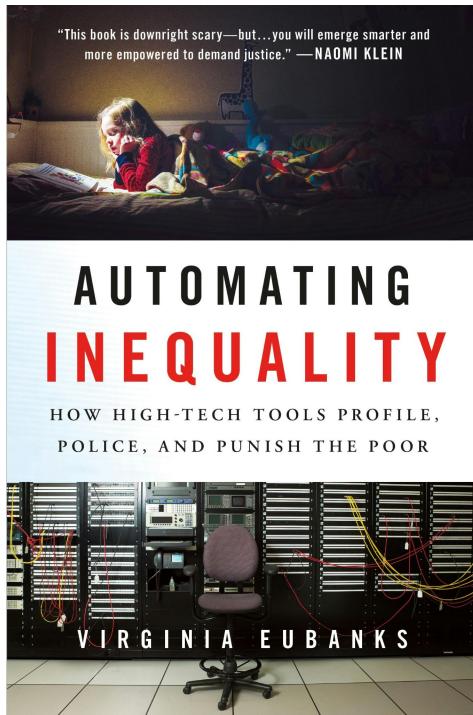
Data Science with Whose Interests and Goals?

- Powerful institutions **collect too much data** on **marginalized groups**
- **Excessive surveillance**



<https://tinyurl.com/258wtz4x>

Automating Inequality - Virginia Eubanks



<https://tinyurl.com/yc3jejj4>

The Allegheny Algorithm

The Allegheny Algorithm Assumptions

- That **more data** is always **better**.
- The data is a **neutral** input.



<https://tinyurl.com/2c886uc5>

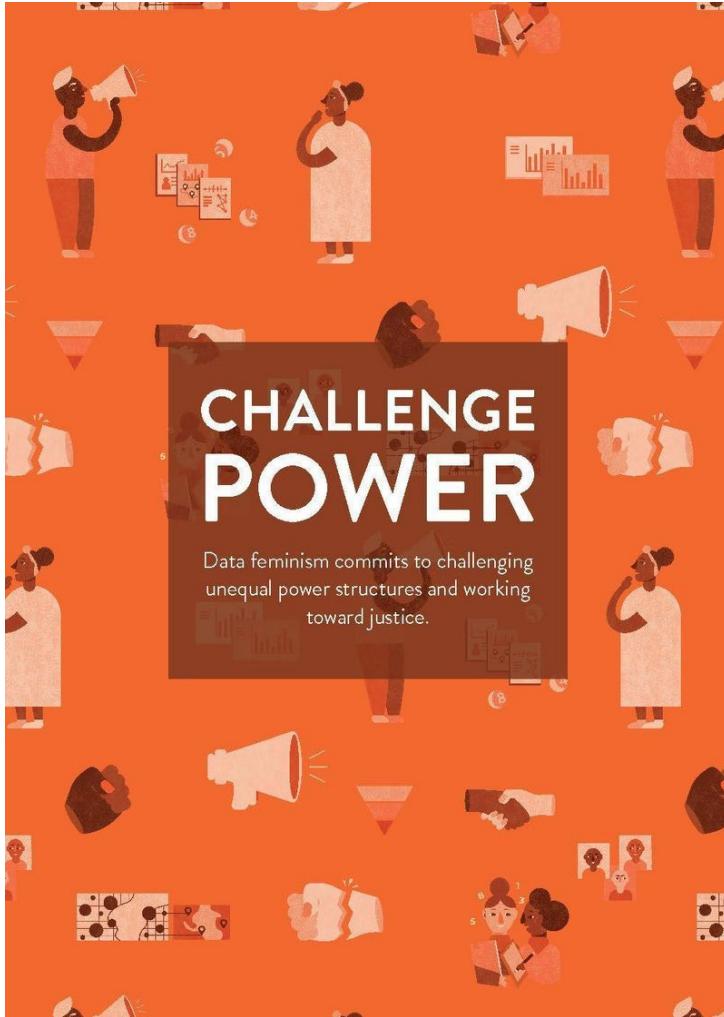
Raw Data



Data are never **raw**, they are always the product of **unequal social relations**.

"This data is raw."

<https://tinyurl.com/4b69fp9m>



Challenge Power

- Taking action against an **unjust status quo**.



Questions for Discussion

- What can the people who design these computational systems do to avoid these pitfalls?
- And what can everyone else do to help them and hold them accountable?

Data Ethics

- Ensuring that the **ethical issues** brought about by our increasing reliance on **data-driven systems** are identified and addressed.
- Emphasizing on **bias**, **fairness**, **accountability**, and **transparency**.

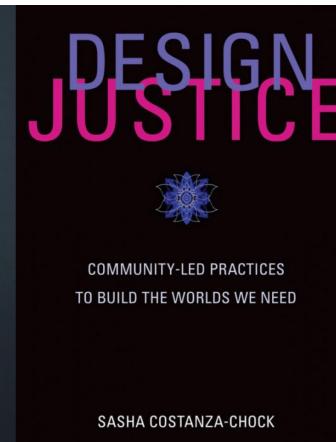


What Are the Root Causes?

**matrix of
domination**

Restorative Approach to Data Justice

- Decisions should be made in ways that recognize and rectify any harms of the past.
 - Sasha C. asserts that any notion of algorithmic fairness must acknowledge the systematic nature of the unfairness that has long been perpetrated by certain groups on others.



From Data Ethics to Data Justice

From Data Ethics to Data Justice

Concepts That Secure Power

because they locate the source of the problem in individuals or technical systems

Ethics

Bias

Fairness

Accountability

Transparency

Understanding Algorithms

Concepts That Challenge Power

because they acknowledge structural power differentials and work toward dismantling them

Justice

Oppression

Equity

Co-liberation

Reflexivity

Understanding history, culture, and context

what
can
we do ?



Challenge Power in Action

Example

Biased Facial Recognition - Joy Buolamwini



<https://tinyurl.com/8c4c3754>

Potential Solution

- Create a **more representative** dataset.
 - E.g., **Diversity in Faces (DiF)** by IBM in 2019.
- Is a diverse dataset of faces really a good idea?



Matrix of Domination - Structural Domain

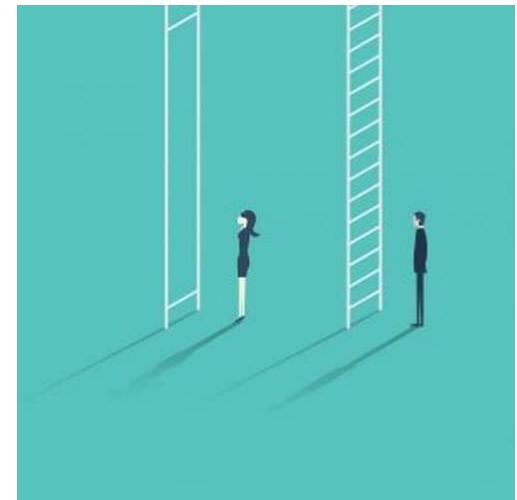
- Focus: Laws, policies, and institutional
- Advocating for professional standards in computer vision.
- Speaking to Congress and the media to demand a pause on police use of facial recognition.
- Influencing institutional norms and accountability mechanisms.



<https://poetofcode.com/advocacy/>

Matrix of Domination - Disciplinary Domain

- Focus: Rules, practices, and system enforcement
- Conducting technical audits of facial recognition systems.
- Quantifying disparities in datasets.
- Exposing how algorithmic rules are implemented and enforced unequally.



Matrix of Domination - Hegemonic Domain

- Focus: Culture, media, and public narratives
- Launching the Algorithmic Justice League (AJL).
- Producing viral poetry projects.
- Giving TED talks.



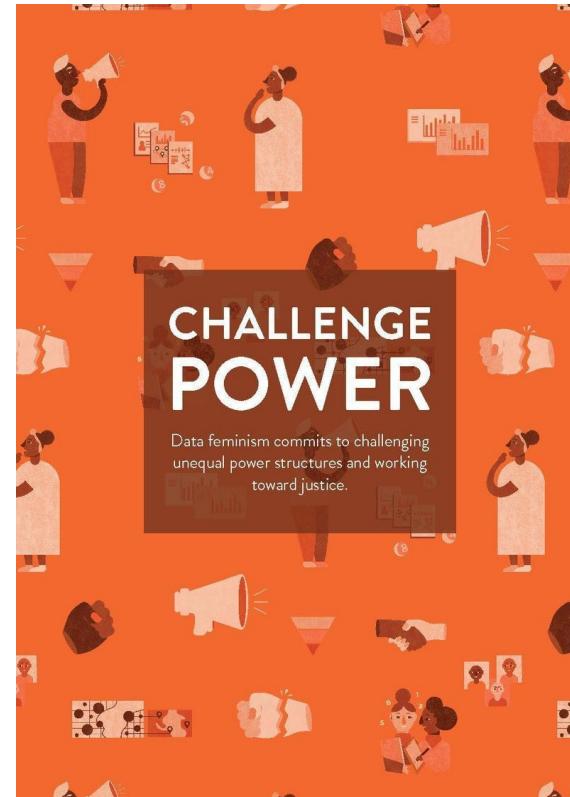
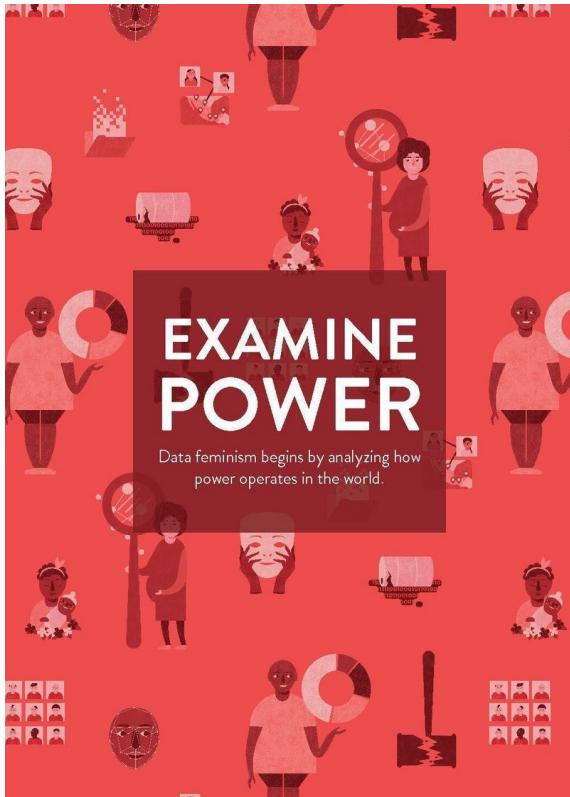
Matrix of Domination - Interpersonal Domain

- **Focus:** Everyday **interactions** and **relationships**
- **Collaborating** with students and researchers to **critically shape their work** in AI and data science.
- Leading **initiatives** that show how **algorithmic bias** requires **more than technical fixes**.
- **Cultivating awareness** of bias in daily research and development practices.



<https://www.ajl.org/about>

Summary



- Data Feminism, Catherine D'Ignazio and Lauren F. Klein ([intro](#), [ch. 1](#), [ch. 2](#))
- Black Feminist Thought, Patricia Hill Collins (ch. 12)
- Design Justice, Sasha Costanza-Chock ([intro](#))
- Dig Deep: Beyond Lean In, bell hooks [[link](#)]
- Feminism for the 99%: A Manifesto, Nancy Fraser (thesis 1-10)
- Data Grab, Ulises A. Mejias and Nick Couldry (ch. 1, ch. 6)
- Feminist Theory: From Margin to Center, bell hooks (ch. 1)
- Algorithms of Oppression, Safiya Umoja Noble (ch. 1)
- Race after Technology, Ruha Benjamin (intro)
- Automating Inequality, Virginia Eubanks (ch. 4)
- Demarginalizing the Intersection of Race and Sex, Kimberlé Crenshaw
- Restorative Justice and Reparations, Margaret Urban Walker
- Combahee River Collective Statement [[link](#)]
- Exclusive: Workers at Google DeepMind Push Company to Drop Military Contracts [[link](#)]
- Forget Project Maven. Here Are A Couple Other DoD Projects Google Is Working On [[link](#)]