Programmed Inequality

Poster utstilling IFI Library

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1. Benjamin, R. (2019). *Race After Technology: Abolitionist Tools for the New Jim Code*. Wiley.

Description

From everyday apps to complex algorithms, Ruha Benjamin cuts through tech-industry hype to understand how emerging technologies can reinforce White supremacy and deepen social inequity.

Benjamin argues that automation, far from being a sinister story of racist programmers scheming on the dark web, has the potential to hide, speed up, and deepen discrimination while appearing neutral and even benevolent when compared to the racism of a previous era. Presenting the concept of the "New Jim Code," she shows how a range of discriminatory designs encode inequity by explicitly amplifying racial hierarchies; by ignoring but thereby replicating social divisions; or by aiming to fix racial bias but ultimately doing quite the opposite. Moreover, she makes a compelling case for race itself as a kind of technology, designed to stratify and sanctify social injustice in the architecture of everyday life.

This illuminating guide provides conceptual tools for decoding tech promises with sociologically informed skepticism. In doing so, it challenges us to question not only the technologies we are sold but also the ones we ourselves manufacture.

2. Brayne, S. (2020). *Predict and Surveil: Data, Discretion, and the Future of Policing*. Oxford University Press.

Description

- Includes never-published, first-hand accounts of how a massive law enforcement agency leverages big data technologies to expand surveillance in the name of objective, predictive policing
- Provides a new understanding of the scope of police surveillance in today's digital world
- Argues that the use of big data and algorithms by police widens the scope of the criminal justice system, results in massively increased surveillance, and reinforces stereotypes and discrimination
- Reveals the collaboration between public law enforcement, private data brokers, and technology companies

3. Broussard, M. (2018). *Artificial Unintelligence: How Computers Misunderstand the World*. MIT Press.

Description

A guide to understanding the inner workings and outer limits of technology and why we should never assume that computers always get it right.

In *Artificial Unintelligence*, Meredith Broussard argues that our collective enthusiasm for applying computer technology to every aspect of life has resulted in a tremendous amount of poorly designed systems. We are so eager to do everything digitally—hiring, driving, paying bills, even choosing romantic partners—that we have stopped demanding that our technology actually work. Broussard, a software developer and journalist, reminds us that there are fundamental limits to what we can (and should) do with technology. With this book, she offers a guide to understanding the inner workings and outer limits of technology—and issues a warning that we should never assume that computers always get things right.

Making a case against *technochauvinism*—the belief that technology is always the solution—Broussard argues that it's just not true that social problems would inevitably retreat before a digitally enabled Utopia. To prove her point, she undertakes a series of adventures in computer programming. She goes for an alarming ride in a driverless car, concluding "the cyborg future is not coming any time soon"; uses artificial intelligence to investigate why students can't pass standardized tests; deploys machine learning to predict which passengers survived the *Titanic* disaster; and attempts to repair the U.S. campaign finance system by building AI software. If we understand the limits of what we *can* do with technology, Broussard tells us, we can make better choices about what we *should* do with it to make the world better for everyone.

4. Costanza-Chock, S. (2020). *Design Justice: Community-Led Practices to Build the Worlds We Need*. MIT Press

Description

An exploration of how design might be led by marginalized communities, dismantle structural inequality, and advance collective liberation and ecological survival.

What is the relationship between design, power, and social justice? "Design justice" is an approach to design that is led by marginalized communities and that aims expilcitly to challenge, rather than reproduce, structural inequalities. It has emerged from a growing community of designers in various fields who work closely with social movements and community-based organizations around the world.

This book explores the theory and practice of design justice, demonstrates how universalist design principles and practices erase certain groups of people—specifically, those who are intersectionally disadvantaged or multiply burdened under the matrix of domination (white supremacist heteropatriarchy, ableism, capitalism, and settler colonialism)—and invites readers to "build a better world, a world where many worlds fit; linked worlds of collective liberation and ecological sustainability." Along the way, the book documents a multitude of real-world community-led design practices, each grounded in a particular social movement. *Design Justice* goes beyond recent calls for design for good, user-centered design, and

employment diversity in the technology and design professions; it connects design to larger struggles for collective liberation and ecological survival.

5. Crawford, Kare (2021). Atlas of AI. Yale University Press.

Description
What happens when artificial intelligence saturates political life and depletes the planet? How is AI shaping our understanding of ourselves and our societies? Drawing on more than a decade of research, award-winning scholar Kate Crawford reveals how AI is a technology of extraction: from the minerals drawn from the earth, to the labor pulled from low-wage information workers, to the data taken from every action and expression. This book reveals how this planetary network is fueling a shift toward undemocratic governance and increased inequity. Rather than taking a narrow focus on code and algorithms, Crawford offers us a material and political perspective on what it takes to make AI and how it centralizes power. This is an urgent account of what is at stake as technology companies use artificial intelligence to reshape the world.

6. D'Ignazio, C., & Klein, L. F. (2020). *Data Feminism*. MIT Press

Description
A new way of thinking about data science and data ethics that is informed by the ideas of intersectional feminism.

The open access edition of this book was made possible by generous funding from the MIT Libraries.

Today, data science is a form of power. It has been used to expose injustice, improve health outcomes, and topple governments. But it has also been used to discriminate, police, and surveil. This potential for good, on the one hand, and harm, on the other, makes it essential to ask: Data science by whom? Data science for whom? Data science with whose interests in mind? The narratives around big data and data science are overwhelmingly white, male, and techno-heroic. In *Data Feminism*, Catherine D'Ignazio and Lauren Klein present a new way of thinking about data science and data ethics—one that is informed by intersectional feminist thought.

Illustrating data feminism in action, D'Ignazio and Klein show how challenges to the male/female binary can help challenge other hierarchical (and empirically wrong) classification systems. They explain how, for example, an understanding of emotion can expand our ideas about effective data visualization, and how the concept of invisible labor can expose the significant human efforts required by our automated systems. And they show why the data never, ever "speak for themselves."

Data Feminism offers strategies for data scientists seeking to learn how feminism can help them work toward justice, and for feminists who want to focus their efforts on the growing field of data science. But *Data Feminism* is about much more than gender. It is about power, about who has it and who doesn't, and about how those differentials of power can be challenged and changed.

7 Eubanks, V. (2018). *Automating Inequality: How High-Tech Tools Profile, Police, and Punish the Poor*. St. Martin's Press.

Description

A powerful investigative look at data-based discrimination—and how technology affects civil and human rights and economic equity

The State of Indiana denies one million applications for healthcare, foodstamps and cash benefits in three years—because a new computer system interprets any mistake as "failure to cooperate." In Los Angeles, an algorithm calculates the comparative vulnerability of tens of thousands of homeless people in order to prioritize them for an inadequate pool of housing resources. In Pittsburgh, a child welfare agency uses a statistical model to try to predict which children might be future victims of abuse or neglect.

Since the dawn of the digital age, decision-making in finance, employment, politics, health and human services has undergone revolutionary change. Today, automated systems—rather than humans—control which neighborhoods get policed, which families attain needed resources, and who is investigated for fraud. While we all live under this new regime of data, the most invasive and punitive systems are aimed at the poor.

In *Automating Inequality,* Virginia Eubanks systematically investigates the impacts of data mining, policy algorithms, and predictive risk models on poor and working-class people in America. The book is full of heart-wrenching and eye-opening stories, from a woman in Indiana whose benefits are literally cut off as she lays dying to a family in Pennsylvania in daily fear of losing their daughter because they fit a certain statistical profile.

The U.S. has always used its most cutting-edge science and technology to contain, investigate, discipline and punish the destitute. Like the county poorhouse and scientific charity before them, digital tracking and automated decision-making hide poverty from the middle-class public and give the nation the ethical distance it needs to make inhumane choices: which families get food and which starve, who has housing and who remains homeless, and which families are broken up by the state. In the process, they weaken democracy and betray our most cherished national values.

8. Hicks, M. (2017). *Programmed Inequality: How Britain Discarded Women Technologists and Lost Its Edge in Computing.* MIT Press.

Description

How Britain lost its early dominance in computing by systematically discriminating against its most qualified workers: women.

In 1944, Britain led the world in electronic computing. By 1974, the British computer industry was all but extinct. What happened in the intervening thirty years holds lessons for all postindustrial superpowers. As Britain struggled to use technology to retain its global power, the nation's inability to manage its technical labor force hobbled its transition into the information age.

In *Programmed Inequality*, Mar Hicks explores the story of labor feminization and gendered technocracy that undercut British efforts to computerize. That failure sprang from the government's systematic neglect of its largest trained technical workforce simply because

they were women. Women were a hidden engine of growth in high technology from World War II to the 1960s. As computing experienced a gender flip, becoming male-identified in the 1960s and 1970s, labor problems grew into structural ones and gender discrimination caused the nation's largest computer user—the civil service and sprawling public sector—to make decisions that were disastrous for the British computer industry and the nation as a whole.

Drawing on recently opened government files, personal interviews, and the archives of major British computer companies, *Programmed Inequality* takes aim at the fiction of technological meritocracy. Hicks explains why, even today, possessing technical skill is not enough to ensure that women will rise to the top in science and technology fields. *Programmed Inequality* shows how the disappearance of women from the field had grave macroeconomic consequences for Britain, and why the United States risks repeating those errors in the twenty-first century.

9. Lanier, J. (2019). *Ten Arguments for Deleting Your Social Media Accounts Right Now*. MacMillan Publishers.

Description
A timely call-to-arms from a Silicon Valley pioneer.

You might have trouble imagining life without your social media accounts, but virtual reality pioneer Jaron Lanier insists that we're better off without them. In *Ten Arguments for Deleting Your Social Media Accounts Right Now*, Lanier, who participates in no social media, offers powerful and personal reasons for all of us to leave these dangerous online platforms.

Lanier's reasons for freeing ourselves from social media's poisonous grip include its tendency to bring out the worst in us, to make politics terrifying, to trick us with illusions of popularity and success, to twist our relationship with the truth, to disconnect us from other people even as we are more "connected" than ever, to rob us of our free will with relentless targeted ads. How can we remain autonomous in a world where we are under continual surveillance and are constantly being prodded by algorithms run by some of the richest corporations in history that have no way of making money other than being paid to manipulate our behavior? How could the benefits of social media possibly outweigh the catastrophic losses to our personal dignity, happiness, and freedom? Lanier remains a tech optimist, so while demonstrating the evil that rules social media business models today, he also envisions a humanistic setting for social networking that can direct us toward a richer and fuller way of living and connecting with our world.

10. Mullaney, T. S., Peters, B., Hicks, M., & Philip, K. (eds.) (2021). *Your Computer Is on Fire*. MIT Press.

Description
Techno-utopianism is dead: Now is the time to pay attention to the inequality, marginalization, and biases woven into our technological systems.

This book sounds an alarm: after decades of being lulled into complacency by narratives of technological utopianism and neutrality, people are waking up to the large-scale consequences of Silicon Valley–led technophilia. This book trains a spotlight on the inequality, marginalization, and biases in our technological systems, showing how they are

not just minor bugs to be patched, but part and parcel of ideas that assume technology can fix—and control—society.

The essays in *Your Computer Is on Fire* interrogate how our human and computational infrastructures overlap, showing why technologies that centralize power tend to weaken democracy. These practices are often kept out of sight until it is too late to question the costs of how they shape society. From energy-hungry server farms to racist and sexist algorithms, the digital is always IRL, with everything that happens algorithmically or online influencing our offline lives as well. Each essay proposes paths for action to understand and solve technological problems that are often ignored or misunderstood.

11. Noble, S. U. (2018). *Algorithms of Oppression: How Search Engines Reinforce Racism*. NYU Press.

Description

A revealing look at how negative biases against women of color are embedded in search engine results and algorithms

Run a Google search for "black girls"—what will you find? "Big Booty" and other sexually explicit terms are likely to come up as top search terms. But, if you type in "white girls," the results are radically different. The suggested porn sites and un-moderated discussions about "why black women are so sassy" or "why black women are so angry" presents a disturbing portrait of black womanhood in modern society.

In *Algorithms of Oppression*, Safiya Umoja Noble challenges the idea that search engines like Google offer an equal playing field for all forms of ideas, identities, and activities. Data discrimination is a real social problem; Noble argues that the combination of private interests in promoting certain sites, along with the monopoly status of a relatively small number of Internet search engines, leads to a biased set of search algorithms that privilege whiteness and discriminate against people of color, specifically women of color.

Through an analysis of textual and media searches as well as extensive research on paid online advertising, Noble exposes a culture of racism and sexism in the way discoverability is created online. As search engines and their related companies grow in importance—operating as a source for email, a major vehicle for primary and secondary school learning, and beyond—understanding and reversing these disquieting trends and discriminatory practices is of utmost importance.

An original, surprising and, at times, disturbing account of bias on the internet, *Algorithms of Oppression* contributes to our understanding of how racism is created, maintained, and disseminated in the 21st century.

12. Noble, S. U., & Tynes, B. M. (Eds.). (2016). *The Intersectional Internet: Race, Sex, Class, and Culture Online*. Peter Lang.

Description

From race, sex, class, and culture, the multidisciplinary field of Internet studies needs theoretical and methodological approaches that allow us to question the organization of social relations that are embedded in digital technologies, and that foster a clearer

understanding of how power relations are organized through technologies.

Representing a scholarly dialogue among established and emerging critical media and information studies scholars, this volume provides a means of foregrounding new questions, methods, and theories which can be applied to digital media, platforms, and infrastructures. These inquiries include, among others, how representation to hardware, software, computer code, and infrastructures might be implicated in global economic, political, and social systems of control.

Contributors argue that more research needs to explicitly trace the types of uneven power relations that exist in technological spaces. By looking at both the broader political and economic context and the many digital technology acculturation processes as they are differentiated intersectionally, a clearer picture emerges of how under-acknowledging culturally situated and gendered information technologies are impacting the possibility of participation with (or purposeful abstinence from) the Internet.

This book is ideal for undergraduate and graduate courses in Internet studies, library and information studies, communication, sociology, and psychology. It is also ideal for researchers with varying expertise and will help to advance theoretical and methodological approaches to Internet research.

13. O'Neil, C. (2016). *Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy*. Crown Random House.

Description

A former Wall Street quant sounds an alarm on the mathematical models that pervade modern life — and threaten to rip apart our social fabric

We live in the age of the algorithm. Increasingly, the decisions that affect our lives—where we go to school, whether we get a car loan, how much we pay for health insurance—are being made not by humans, but by mathematical models. In theory, this should lead to greater fairness: Everyone is judged according to the same rules, and bias is eliminated.

But as Cathy O'Neil reveals in this urgent and necessary book, the opposite is true. The models being used today are opaque, unregulated, and uncontestable, even when they're wrong. Most troubling, they reinforce discrimination: If a poor student can't get a loan because a lending model deems him too risky (by virtue of his zip code), he's then cut off from the kind of education that could pull him out of poverty, and a vicious spiral ensues. Models are propping up the lucky and punishing the downtrodden, creating a "toxic cocktail for democracy." Welcome to the dark side of Big Data.

Tracing the arc of a person's life, O'Neil exposes the black box models that shape our future, both as individuals and as a society. These "weapons of math destruction" score teachers and students, sort résumés, grant (or deny) loans, evaluate workers, target voters, set parole, and monitor our health.

O'Neil calls on modelers to take more responsibility for their algorithms and on policy makers to regulate their use. But in the end, it's up to us to become more savvy about the models that govern our lives. This important book empowers us to ask the tough questions, uncover the truth, and demand change.

14. Perez, C. C. (2019). *Invisible Women: Data Bias in a World Designed for Men*. Abrams Press.

Description

Data is fundamental to the modern world. From economic development to health care to education and public policy, we rely on numbers to allocate resources and make crucial decisions. But because so much data fails to take into account gender, because it treats men as the default and women as atypical, bias and discrimination are baked into our systems. And women pay tremendous costs for this insidious bias, in time, in money, and often with their lives.

Celebrated feminist advocate Caroline Criado Perez investigates this shocking root cause of gender inequality in the award-winning, #1 international bestseller *Invisible Women*. Examining the home, the workplace, the public square, the doctor's office, and more, Criado Perez unearths a dangerous pattern in data and its consequences on women's lives. Product designers use a "one-size-fits-all" approach to everything from pianos to cell phones to voice recognition software, when in fact this approach is designed to fit men. Cities prioritize men's needs when designing public transportation, roads, and even snow removal, neglecting to consider women's safety or unique responsibilities and travel patterns. And in medical research, women have largely been excluded from studies and textbooks, leaving them chronically misunderstood, mistreated, and misdiagnosed.
Built on hundreds of studies in the United States, in the United Kingdom, and around the world, and written with energy, wit, and sparkling intelligence, this is a groundbreaking, highly readable exposé that will change the way you look at the world.

15. Turkle, S. (2017). *Alone Together: Why We Expect More from Technology and Less from Each Other*. Basic Books.

Description

A groundbreaking book by one of the most important thinkers of our time shows how technology is warping our social lives and our inner ones

Technology has become the architect of our intimacies. Online, we fall prey to the illusion of companionship, gathering thousands of Twitter and Facebook friends, and confusing tweets and wall posts with authentic communication. But this relentless connection leads to a deep solitude. MIT professor Sherry Turkle argues that as technology ramps up, our emotional lives ramp down. Based on hundreds of interviews and with a new introduction taking us to the present day, *Alone Together* describes changing, unsettling relationships between friends, lovers, and families.

16. Vaidhyanathan, S. (2018). *Antisocial Media: How Facebook Disconnects Us and Undermines Democracy*. Oxford University Press.

Description

If you wanted to build a machine that would distribute propaganda to millions of people, distract them from important issues, energize hatred and bigotry, erode social trust, undermine respectable journalism, foster doubts about science, and engage in massive surveillance all at once, you would make something a lot like Facebook. Of course, none of that was part of the plan.

In this fully updated paperback edition of *Antisocial Media*, Siva Vaidhyanathan explains how Facebook devolved from an innocent social site hacked together by Harvard students into a force that, while it may make personal life just a little more pleasurable, makes democracy a lot more challenging. It's an account of the hubris of good intentions, a missionary spirit, and an ideology that sees computer code as the universal solvent for all human problems. And it's an indictment of how "social media" has fostered the deterioration of democratic culture around the world, from facilitating Russian meddling in support of Trump's election to the exploitation of the platform by murderous authoritarians in Burma and the Philippines. Both authoritative and trenchant, *Antisocial Media* shows how Facebook's mission went so wrong.

17. Zuboff, S. (2019). *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power*. PublicAffairs.

Description

The challenges to humanity posed by the digital future, the first detailed examination of the unprecedented form of power called "surveillance capitalism," and the quest by powerful corporations to predict and control our behavior.

In this masterwork of original thinking and research, Shoshana Zuboff provides startling insights into the phenomenon that she has named surveillance capitalism. The stakes could not be higher: a global architecture of behavior modification threatens human nature in the twenty-first century just as industrial capitalism disfigured the natural world in the twentieth.

Zuboff vividly brings to life the consequences as surveillance capitalism advances from Silicon Valley into every economic sector. Vast wealth and power are accumulated in ominous new "behavioral futures markets," where predictions about our behavior are bought and sold, and the production of goods and services is subordinated to a new "means of behavioral modification."

The threat has shifted from a totalitarian Big Brother state to a ubiquitous digital architecture: a "Big Other" operating in the interests of surveillance capital. Here is the crucible of an unprecedented form of power marked by extreme concentrations of knowledge and free from democratic oversight. Zuboff's comprehensive and moving analysis lays bare the threats to twenty-first century society: a controlled "hive" of total connection that seduces with promises of total certainty for maximum profit -- at the expense of democracy, freedom, and our human future.

With little resistance from law or society, surveillance capitalism is on the verge of dominating the social order and shaping the digital future -- if we let it.