

RACE AFTER TECHNOLOGY
BY: RUHA BENJAMIN
STUDY GUIDE



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Source: ruhabenjamin.com

INTRODUCTION

Race After Technology explores the impacts of a society that equates technological advancements with social progress. We need to take a step back and consider who is benefiting from new technology and who is further disadvantaged. Benjamin coins the term, New Jim Code, to describe **“the employment of new technologies that reflect and reproduce existing inequality but that are promoted and perceived as more objective or progressive than the discriminatory systems of a previous era”** (5-6). The New Jim Code encompasses a wide range of discriminatory designs, some of which **explicitly “amplify hierarchies,”** others **“that ignore and thus replicate social divisions,”** and many that actually **“aim to fix racial bias but end up doing the opposite”** (8). If this is the “New Jim Crow,” what was the “Old Jim Crow”? Jim Crow was a series of laws and regulations in the US South from the 1890s to the 1950s that legalized racial segregation, oppression, and injustice. The term can be used to “describe an era, a geographic region, laws, institutions, customs, and a code of behavior that upholds White supremacy” (9). Today, we see a shift from explicit discriminatory laws to more subtle, colorblind ideologies that **mask their destruction under the guise of progress.** History and the ongoing inequities that result from Jim Code don’t just go away when seemingly unbiased technology is introduced. Cultural coding from Jim Code is embedded into our new forms of technology (9).

 **LEARN MORE:**
[Jim Crow Video Explanation](#)

The New Jim Code is a part of a broader neoliberal push toward privatization **where profits are prioritized over humans,** especially humans who are most marginalized (30). One of the core practices of the New Jim Code is technological approaches that claim to alleviate societal problems, such as mass incarceration but end up deepening racial inequities.

These so-called solutions “are seen as not only good but necessary” and are “a key feature of cost-cutting measures” that outsource “smart machines” (30). Whether these automatic decision-making tools determine which teacher to fire or which loan to approve, they are attractive because they remove the burden (and workload) from organizations to make unbiased judgments. What we are told is bias minimization, is actually just profit maximization (30).

“The outsourcing of human decision making is the insourcing of coded inequity” (30)

“Race as technology” is “an invitation to consider racism in relation to other forms of domination as not just an ideology or history, but as a set of technologies that generate patterns of social relations” that become natural (44-45). Benjamin’s hope is to challenge coded inequity and the ways in which **Whiteness becomes the default setting for tech development** (48). The following chapters examine various examples of coded inequity, from explicit to covert, with the vision of new designs.

CH 1: ENGINEERED INEQUALITY



MAIN IDEAS

- Robots are often employed as an unbiased tool, yet hold the biases of their creators
- Technology that ignores how the “past shapes the present” inadvertently perpetuates racial inequities that stem from slavery and Jim Crow
- It’s not about intention; it’s about action

In 2016, Beauty AI launched the first ever beauty contest judged by robots (49). To enter, you had to download the Beauty AI app, upload a no makeup/no beard/ no glasses selfie, and wait for the king and queen to be announced a few months later. Robots assessed people “on the basis of wrinkles, face symmetry, skin color, gender, age group, ethnicity, and other parameters” (49-50). There were over 6,000 submissions from over 100 countries. Based on the 44 all white winners, it was clear that **“the robots did not like people with dark skin”** (50). Beauty AI claimed to have used “the most advanced machine-learning technology available” that measured each photo against the algorithm’s “embedded preferences” (50). The word embedded is important here, for it implies that **the bias was directly coded into the robot’s preferences**, whether intentional or not. Robots were employed to reduce human bias, but how can an algorithm designed by humans situated in a specific sociohistorical climate be free of human bias? According to Dr. Benjamin, robots, like in the Beauty AI contest, exemplify “how race is a form of technology itself” (52). Racist robots, as she calls them, are social biases installed into technical artifacts with “the allure of objectivity without public accountability” (53). The way robots are racist is often a mystery or fully hidden from external view (53).

Public agencies are increasingly employing machine learning systems designed by private companies without proper regulations (53). This means that the very services we rely on for welfare, education, and public safety could be using ‘racist robots’ and, as a result, further oppress the most vulnerable. The worst part is that people directly impacted by automated decisions have very little say in how they are governed.

In North America today, some are under the impression that racism isn’t a massive issue anymore. After all, there are no explicitly discriminatory laws, public figures will get ‘canceled’ for using racial slurs, and we have many beloved Black celebrities and politicians. And, with all this new technology comes the promise of a raceless world where everyone is treated equally by unbiased technology. This mindset is an illusion. Good intentions do not equal positive or progressive outcomes. As Dr. Benjamin notes, **“racism flourishes well beyond hate-filled hearts”** (60). An indifferent insurance adjuster who uses a credit score to calculate a risk score, for example, may perpetuate historical forms of racism just by simply doing her job (60). We don’t need to be overtly racist to perpetuate inequality, just indifferent to “how the past shapes the present”. In the case of the insurance adjuster, inequality is perpetuated by using biased historical data to calculate risk score and being indifferent to “the US government’s explicit intention to concentrate the wealth in the hands of White Americans” (60). Ignoring the past **“ensures its ongoing codification.”** Robots learn from their human parents, not just programmers but also everyone who contributes to the data set. History, including the impacts of the Jim Code, is embedded in that data set.

Not all technology is going to have racist effects, but **we need to be more critical of the hype around “better, faster, fairer” and what it could be “hiding and making us ignore”** (76). We need to challenge organizations that “reap the reward” when things go well and “downplay responsibility” when things go wrong (76).

CH 2: DEFAULT DISCRIMINATION



MAIN IDEAS

- Glitches expose the underlying structure of a corrupt system
- Predictive algorithms that rely upon historical data build upon and reproduce social hierarchies
- Architecture, similar to programming, reflects the needs and priorities of those with the most social power
- Online tools that rely on human generated databases reproduce human biases

Is the Glitch Systemic?

A glitch is a minor problem, a false or spurious electronic signal, a brief or sudden interruption or irregularity (77).



This Tweet is referring to a street called Malcolm X Boulevard, named after the Black liberation leader who was assassinated in New York City in 1965. Google Maps was programmed inaccurately and read the street as the roman numeral ten. This "glitch" is an example of how "cultural norms and practices of programmers," who largely consist of middle to upper class White men, "**are coded into our technical systems**" (78).

What appears to be mere directions “reflect and reproduce racialized commands that instruct people where they belong in the larger social order” (78). “Not all codes are created equal,” as **“they reflect particular perspectives and forms of social organization** that allow some people to assert themselves, their assumptions, interests, and desires, over others” (78). Database design, therefore, is a type of world-building where **programmers reproduce their own worldviews** (78). Just as legal codes are mistakenly considered objective and colorblind, the mystery surrounding computer codes “hides the human biases involved in technical design” (78). Glitches, like in the case of “Malcolm ten,” are “generally considered a fleeting interruption of an otherwise benign system” rather than a core component of social life. What happens if we instead comprehend glitches “to be a slippery place between fleeting and durable, micro-interactions and macro-structures, individual hate and institutional indifference?” (80). In this case, **glitches are not an anomaly but rather an exposure of the “underlying flaws in a corrupted system”** (80)

Automated risk assessments that disproportionately target Black people are no glitch, they are rigged (82). These risk assessments determine how likely a neighborhood is to be crime-ridden, and how likely an individual is to recommit a crime. This technology uses historical data to determine which neighborhoods to police and for how long to release people on parole (81). By generating risk scores based on “already existing forms of racial domination,” algorithms reinforce and reproduce similar outcomes (81). Predictive policing software is more likely to guide the police to Black neighborhoods **“because the data this software is drawing from reflect ongoing surveillance priorities that target predominantly Black neighborhoods”** (82). The more police surveillance there is in Black neighborhoods, the more crimes will be ‘caught’ and the more data feeds back into the system to predict more crimes in those neighborhoods. Jackie Wang, the author of *Carceral Capitalism*, asks us: **“how might the expectation of finding crime influence what the officers actually find?”** Will people who pass through these temporary crime zones while they are being patrolled by officers automatically be perceived as suspicious?” (83). “The Danger with New Jim Code predictions,” Dr. Benjamin explains, “is the way in which self-fulfilling prophecies **enact what they predict**, giving the allure of accuracy” (83).

“If a prediction matches the current crime rate, it is still unjust!” (82)

A study of recidivism rates in Broward County, Florida, found their score predictor to be extremely unreliable in forecasting violent crime. The study also discovered that **the formula was almost twice as likely to falsely flag Black defendants as future criminals than white defendants** and more likely to mislabel white defendants as low risk than Black defendants (81). If we situate racist glitches “in the larger complex of social meanings and structures,” we can begin to understand them “as a signal rather than a distraction” (87).

Robert Moses, known as a “master builder” in the mid-twentieth century, favored suburbanization and upper-middle class mobility over poor and working-class New Yorkers (91). One of Moses’s highly disputed projects, low-hanging overpasses that line the Long Island parkway system, actively prevented buses from using the roads and enabled **“White, affluent car owners to move freely, while working-class and non-White people who relied on buses were prevented from accessing the suburbs and beaches”** (92). Whereas Jim Crow laws explicitly segregated Black people from White people in numerous spaces and services, “the debate of Moses’ intention to discriminate against black people continues” (92). One point, however, remains clear: “the way we engineer the material world reflects and reinforces (but could also be used to subvert) social hierarchies” (92).

Google, like racist robots and architecture, “reproduces the biases that persist in the social world” (93). Online tools, after all, “are programmed using algorithms that are constantly updated on the basis of human behavior and are learning and replicating the technology of race, expressed in the many different associations that the users make” (93). In 2016, a search for “three black teenagers” yielded mug shots, whereas a search for “three white teenagers” yielded wholesome group photos. That same year, a search for “unprofessional hairstyles” showed mostly Black women, while a search for “professional hairstyles” showed nearly all White women. **These stereotypes not only impact the way Black people are treated but also justify current inequities: the overrepresentation of Black teenagers in prison and the underrepresentation of Black women in the professional workforce.**

According to Benjamin's research, "men are shown ads for high-income jobs much more frequently than women, and tutoring for what is known in the US as the Scholastic Aptitude Test (SAT) is priced more highly for customers in neighborhoods with a higher density of Asian residents" (95). When search algorithms leverage personal data like someone's zip code, the results can **"reflect, or even amplify, the results of historical or institutional discrimination"** (95).

CH 3: CODED EXPOSURE



MAIN IDEAS

- Different forms of technology render people of color invisible or hypervisible
- Technologies used to capture, classify, or identify humans are anything but neutral
- Surveillance disproportionately impacts marginalized people and maintains social hierarchies

In 2009, the TV sitcom *Better Off Ted* created a parody of biased technology in an episode entitled “Racial Sensitivity.” It is about a workplace that installs new facial recognition technology with an unexpected glitch: it can’t recognize Black people. To cope with this glitch, the company installs manually operated drinking fountains for Black employees who can’t use the facial recognition technology, “an incisive illustration of the New Jim Code wherein tech advancement, posed as a solution, conjures a prior racial regime in the form of separate water fountains” (98). As stated in chapter 1, we cannot ignore how past racial segregation shapes new forms of oppression.

Chapter 3 examines the “complex processes involved in ‘exposing’ race in and through technology and the implications of presenting partial and distorted visions as neutral and universal” (99). From photography to surveillance, different forms of exposure “serve as a touchstone for considering how the act of viewing something or someone may put the object of vision at risk” (100). Scopic vulnerability, as Dr. Benjamin describes it, “is central to the experience of being racialized” (100-101).

Some technologies **don't see Black people at all**, "while others **render Black people hyper-visible** and expose them to systems of racial surveillance" (99). One key technology Dr. Benjamin analyzes is photography, a tool developed to **capture and "classify human differences"** (99). In comparison to paintings or sculptures of "exotic others," photography was thought to be a more "neutral reflection of the world" (99). Photographs, however, were "fabricated according to the demands and desires of those who exercised power and control over others," and some, unsurprisingly, "reflect[ed] White supremacist desires and anxieties" (100).

From the 1950s to the 1990s, Kodak Shirley Cards used White women to standardize the film exposure process (103). This skin tone bias was embedded into the technology, and as a result, people with dark skin were frequently underexposed in photographs (104). According to one photographer, "film stock's failure to capture dark skin [wasn't] a technical issue, they [were] a choice" (104). As public schools began desegregating, technical fixes alone were not enough to fix the obviously poorer quality photos of Black children where their facial features were "blurry" (105). The photographic industry did not make any changes until companies that manufactured brown products like chocolate and wooden furniture started complaining, compromising their profitability potential (105). In 2009, Hewlett Packard's MediaSmart webcam would pan to follow a White face but would stop when someone with a Black face entered the frame. Joy Bulomwini, a Black researcher at MIT, discovered the facial recognition technology she was working on could only recognize her face when she put on a white mask (124). Bulomwini calls this the "coded gaze" (124). According to Dr. Benjamin, "**new tools coded in old biases are surprising only if we equate technological innovation with social progress**" (108).

Photography isn't always oppressive. Cultural studies scholar and media activist Yaba Blay created a social media campaign called Pretty.Period, "which counters the faux compliment that dark-skinned women must routinely endure: you're pretty for a dark-skinned girl. By exposing the gendered racism in the qualifier, Blay responds, "No, we're pretty PERIOD."

<https://www.instagram.com/iampretty.period/?hl=en>

Social theorist Michel Foucault explains how “power is exercised through techniques of surveillance in which people are constantly watched and disciplined” (1111). “The less obvious the mechanism,” Foucault states, “the more powerful the disciplinary function of surveillance” (111). Though all of us with smartphones and internet access are “caught inside the digital dragnet,” the fact remains that **“we do not all experience the dangers of exposure in equal measure”** (111). In reality, “[Black] suspects are caught in the crosshairs of being seen too much via surveillance practices and not enough via software” (113). What does privacy mean for people who are already exposed? (127). Privacy is not only about protecting certain things from the public, “but also about what is strategically exposed” (127). Mamie Till Mobey, for example, is the mother of slain teenager Emmett Till, who chose to expose the mutilated body of her son because “everybody needs to know what happened” (127). Another example is the organization Stop LAPD Spying Coalition that exposes “the lies of law enforcement officials who claim not to know about the very surveillance techniques that the organization records them using” (127).

Around the world, government use of identity technology has led to new forms of “surveillance, coercion, and subordination” (128). In 2015, Kuwait passed a law that requires everyone to submit DNA samples to a massive genetic database in an attempt to save costs and cut benefits (134).

“Kuwait citizenship is restricted to families that have been there since 1920, and is passed down through fathers’ bloodlines, with few exceptions ... Being an oil-rich country, Kuwaiti citizenship comes with a long list of benefits, including free education through college, free healthcare, grocery subsidies, unemployment benefits, and monthly government checks per child. Essentially, the law will allow the government to restrict access to citizenship based on verifiable bloodlines” (135)

With a rise of xenophobia around the world, we need to be concerned about laws like this and the impacts they have on vulnerable populations (136).

CHAPTER 4: TECHNOLOGICAL BENEVOLENCE



MAIN IDEAS

- Technical fixes to mass incarceration and prison overcrowding introduce new opportunities for surveillance and racial targeting
- Tailored advertising that relies on zip codes is effective and profitable because of Jim Crow laws that racially segregated neighborhoods
- Marketers and tech giants exploit one's private information and internet history for profit

Racist policing and mass incarceration are huge issues in the US. To deal with this crisis, many companies are providing technological “fixes”. Grace, a single mother from El Salvador, was in jail for more than a year before being released with an ankle monitor. “It’s like they make us free, but not totally free,” Grace explains (137). “Pseudo-freedom,” and the apparent intention to provide solutions to prison overcrowding, open up “more opportunity to control and capitalize on the electronic alternatives of imprisonment” (137). A more accurate name for electronic monitors would be “e-carceration” (139). Founder and executive director of the Center of Media and Justice, Malkia Cyrill, states “there is increasing evidence that the **algorithmic formulas used to make these decisions** [about who should be assigned e-monitoring] **contain deep-seated racial bias**” (139). This means that “the very solutions to mass incarceration and prison overcrowding [...] give rise to innovative forms of injustice” (140). They are “**racial fixes that harm even as they purport to help**,” a key example of the New Jim Code (140).

Even interventions that directly aim to address racial bias can end up reinforcing the New Jim Code (140). For example, job vetting technologies like HireVue claim to “reduce bias and promote diversity” through an AI-powered program that analyzes and compares recorded interviews of candidates to top-performing employees (140). HireVue is attractive to employers; not only will it save time, **but it also promises to reduce human bias**. Job seekers, on the other hand, are frustrated. Not only do they experience a lack of human contact, but they also don’t know how they are evaluated and why they are rejected. Imagine if every company you applied for used this same technology, if you’re rejected from one company, chances are you’ll be rejected from all of them. Stanford University computer scientist Timmit Gebru, warns “it’s really dangerous to replace thousands of human [perspectives] with one or two algorithms” (140). In 2018, Amazon tried out a screening algorithm that yielded highly discriminatory results against women. The system ranked applicants on a 1-5 scale using the existing resumes of employees from a ten-year period. This backfired, as they used resumes from their existing employing base which is majority male. The algorithm automatically downgraded applications with women’s colleges or terms like “women’s soccer club” (143). Programmers edited the algorithm to make it gender neutral, but they feared other unforeseen discriminatory outcomes. **Neutrality**, as Dr. Benjamin states, **“is no safeguard against discriminatory design”** (143). Algorithms may not only be a “veneer that covers historical fault lines” but also be “streamlining discrimination - making it easier to sift, sort, and justify why tomorrow’s workforce continues to be racially stratified (143).

Diversity Inc., a software company that predicts people’s race by using their first and last names, helps companies target customers. In the age of tailored advertising, this is a very attractive service for companies looking to make the most out of their marketing budget with more accurate predictions. Here’s how Diversity Inc. does it:

SARAH: Generic first name

JOHNSON: English surname does not predict ethnicity

ZIP CODE: Majority Black neighborhood

ETHNICITY: African American

(146)

Racially segregated neighborhoods, a feature from the ongoing legacy of Jim Crow policies, “may yield profitable insights about identity and consumer habits” (146). Previously, laws were explicitly interested in reinforcing racial hierarchies, whereas today, companies are more interested in “better serving” their customers, and above all, profit (147). The takeaway from these examples is to understand **how “historical processes make the present possible”** (147). If “racialized zip codes are the output of Jim Crow Policies,” they are the “input of New Jim Code practices” (147).

Customization, though lucrative for companies, does not always benefit users, especially those seeking privacy. Science and technology studies scholar Janet Vertesi, tried an experiment to keep her pregnancy private from the “bots, trackers, cookies, and other data sniffers online that feed the databases that companies use for targeted advertising” (152). She avoided all baby-related searches on the computer, did not correspond with family and friends over the internet, and paid for all pregnancy-related products using cash or gift cards (152). The evasive behavior “marked her as someone who was likely engaged in illicit activity, and her husband was flagged for buying too many gift cards” (152). Vertesi exclaims, “no one should have to act like a criminal just to have some privacy from marketers and tech giants” (152).

Electronic monitoring, like other “racial fixes” functions to “create vertical realities - **surveillance and control for some” and “security and freedom for others”** (158). People in positions of privilege who are not the intended target of such practices can feel good that we live in a world where technology is being used for good, but in actuality, it is extending “the tentacles of incarceration outside jails and prisons and into the most intimate settings of everyday life” (158).

CHAPTER 5: RETOOLING SOLIDARITY, REIMAGINING JUSTICE



MAIN IDEAS

- Divesting resources into systems as they do not solve the problem if the systems are foregrounded on discrimination
- We need to question who is benefitting and profiting from do-good prison abolitionist technology and the outcomes of such technology on marginalized groups
- Challenging the New Jim Code entails envisioning new alternatives

In 2017, Black trans tech developer, Dr. Kortney Zielger, launched the app “Appolition,” that “converts your daily change into bail money to free Black people” (161). The name is a play on “abolition” and a part of the movement to divest resources from the police system and reinvest in “education, employment, mental health, and a broader support system needed to cultivate safe and thriving communities” (162). The abolitionist movement is not only about ending corrupt systems but also about envisioning new ones (162). It’s tempting to feel like a society without police or prison institutions as we know it is “a far-fetched dream,” but we have to remember that **“those who monopolize power and privilege already live in an abolitionist reality!”** (162). Executive director of Law for Black Lives, Marbre Stahly, asserts: “there’s a lot of abolitionist zones in the US. You go to the Hamptons, it’s abolitionist. You go to the Upper West Side, it’s abolitionist. You go to places in California where the medium income is over a million dollars, abolitionist. There’s not a cop to be seen. And so, **the reality is that rich White people get to deal with all of their problems in ways that don’t involve the police,** or cages, or drug tests or things like that” (163).

Simply reinvesting money outside of the police system, however, is no end-all solution to an abolitionist society “because **schools and public housing as they currently function are an extension of the prison industrial complex**: many operate with a logic of carcerality and on policies that discriminate against those who have been convicted of crimes” (168). Funding systems as they are “will only make them more effective in their current function as institutions of social control” (168). This means that we need to be critical of institutions as well as new technology that promises better outcomes yet maintains social hierarchies.

Empathy today is employed as a “do-good” tool, particularly through virtual reality (VR). It is often described as an “empathy machine,” as it quite literally allows us to see the world through someone else’s eyes. According to Dr. Benjamin, the rhetoric around empathy “creates a moral imperative to sell headsets and consume human anguish” (170).

In 2017, Mark Zuckerberg, founder of Facebook, live-streamed a virtual immersion into the aftermath of the hurricane in Puerto Rico. He received harsh criticism for this exploitation of suffering through new “cool” technology. One critic observed that the empathy machine “asks us to endorse technology without questioning the politics of its construction or who profits from it... Do you really need to wear a VR headset in order to empathize with someone?” (170). Virtual reality creates yet another “opportunity for poverty porn and cultural tourism that reinforces current power dynamics between those who do the seeing and those who are watched” (172). When you put on a headset, power dynamics don’t just magically disappear, and you don’t simply forget who you are.

Back to the prison system, there is a growing buzz around virtual reality that helps train prisoners to gain jobs and life skills before they are released back into society. **In a job market that is riddled with discrimination against African Americans convicted of a felony, is virtual reality training really going to help them get a job?** Essentially, companies are profiting off of their ‘do-good’ abolitionist technology while people convicted of felon are released into a job market that redlines former felons (172).

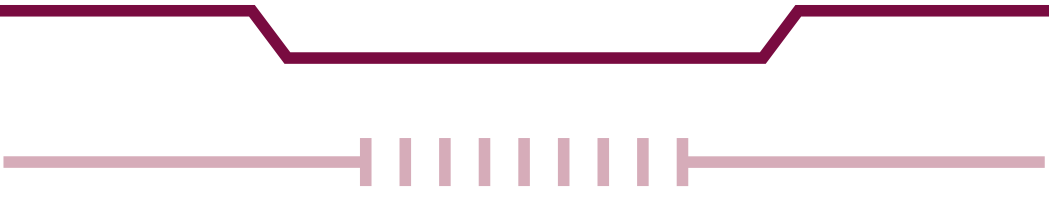
We have to ask ourselves, “who is actually profiting from VR-training for prisoners? And how does this technical fix subdue the call for more far-reaching aims?” (173). Design thinking like this often claims newness and promises to disrupt the status quo, but we need to consider “which humans are prioritized in the process” (174). **As our society races for “newer, faster, better technology, what ways of thinking, being, and organizing social life are potentially snuffed out?”** (180). In other words, we are distracted from the root of the problems and taken further from actual solutions.

Computers and employees in the tech industry are starting to acknowledge their complicity in making the New Jim Code possible, but this is not enough to change the industry:

“Where, after all, is the public outrage over the systematic terror exercised by police in Black neighborhoods with or without the aid of novel technologies? Where are the open letters and employee petitions refusing to build crime production models that entrap racialized communities? Why is there no comparable public fury directed at surveillance techniques, from the prison system to the foster system, that have torn Black families apart long before Trump’s administration? [...] This is why we cannot wait for the tech industry to regulate itself on the basis of popular sympathies” (185)

We also need community-based organizations that counter “the social and political dimensions of the New Jim Code” (188). Check out some organizations below:

- [Detroit Digital Justice Coalition](#)
- [Our Data Bodies Digital Defense Playbook](#)
- [Black in AI](#)
- [Allied Media Network](#)
- [Detroit Community Tech Portal](#)
- [Stop LAPD Spying Coalition](#)
- [Data for Black Lives](#)



We hope this glimpse of *Race After Technology* inspires you to read Dr. Benjamin's work in full and develop your own abolitionist toolkit that questions the outcomes of emerging technologies. Dr. Benjamin encourages us to think beyond an approach that centers on charity and helping those who are less fortunate to one of solidarity and coliberation (194). **"An emancipatory approach to technology,"** Dr. Benjamin explains, "entails an appreciation for the aesthetic dimensions of resisting New Jim Code and a commitment to **coupling our critique with creative alternatives that bring to life liberating and joyful ways of living in and organizing our world**" (197).

DISCUSSION QUESTIONS

1. How does this book change the way you view technology?
2. In the context of tech design, do you think good intentions matter?
3. How are history and culture embedded into technology? Is it possible for technology to exist outside of a socio-historical context?
4. What happens when we falsely assume technology to be unbiased and objective? Who benefits and who is disadvantaged?
5. How do 'technological fixes' to the U.S. criminal justice system (e.g., electronic monitors, predictive policing, virtual reality training) stunt social progress and hinder abolitionist efforts?
6. What do you think an emancipatory approach to technology could look like?