Ruha Benjamin
Race After Technology: Abolitionist Tools for the New Jim Code. Cambridge, Polity, 2019, pp. 172

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Race after Technology is aligned with a growing body of work on critical data studies that seek to unpack forms of social injustice embedded in algorithms and data practices. To that purpose, the book "integrates the tools of science and technology studies (STS) and critical race studies" (p. 34) within the framework of *race critical code studies.* At the core of this framework is the STS-inspired metaphor of the "black box". In the book, this metaphor helps situate algorithms and data practices as kinds of sociotechnical systems with well-known external effects and opaque internal functions. Interestingly, the book does not focus opening the "black box" of algorithms and data practices, understood as in providing an account of their internal mechanisms. Instead, the focus seems to be on unpacking the external effects, and their relationships, which are not only well-known and visible but also oftentimes discriminating and socially unjust.

Methodologically, the focus on unpacking external effects and their relationships is approached by drawing upon "thin description as a method for reading surfaces" (p. 45). As described in the introduction, "thinness" is considered an approach to knowledge production that allows for analytic flexibility by tracing links between surfaces. This approach emphasizes exposing relationships rather than deepening in their underlying phenomena. Indeed, the book is an incredibly rich source of examples that illustrate how systemic forms of racism, sexism, and classism produce and are reproduced in technologies. However, this richness can be at times overwhelming. The focus on illustrating connections rather than on elaborating comparisons helps construct a large mesh of examples. In this way, this approach succeeds in conveying the interwoven complexity of the concerns at stake; however, it can be easy to get lost in all the ramifications and relationships.

As the examples of systemic forms of racism, sexism, and classism unfold, the book makes a solid case for the need to hold public accountability of automated data products. These products being job placement processes, refugee placement algorithms, or loan risk predictions. These contemporary examples are often referred to as the "New Jim Code", meaning forms of systemic bias embedded into technologies that monitor and measure people differently based on race, class, or gender. This neologism is inspired by the Jim Crow Laws, which created legal separations by race in 26 states of the United States of America from 1881 to 1964. Even

though these laws were formally abolished more than 50 years ago, the book shows how their legacy is still very present. In the book, these laws serve as lenses that help reveal how technologies produce, reproduce, and amplify separations in ways that sometimes are invisible and normalised. Similar to the inspiration for the "New Jim Code", most of the examples, terms, policies, and historical events in the book are situated in the United States of America. Indeed, while reading this book together with some of my colleagues at the Confronting Data Co-Lab of the University of Copenhagen, many of the questions we posed ourselves were related to which theories, laws, or empirical evidences would set the ground for a *race critical code studies* from a European perspective.

Interestingly, an example of the European movement of the Luddites helps illustrate what for me it is the main argument of the book. The Luddites were a group of English textile workers who revolted against manufacturers who used machines in nineteenth-century England. Nowadays, the term is still used to describe those who oppose technology. However, the actual meaning of their protest was not the technology in itself but the "social cost" of developing these technologies. Similarly, this book denounces the societal costs of automated data products by exposing relationships, opening up ways to engage with data technologies, and inciting to imagine more socially just alternatives. In my interpretation, this approach is aligned with an anti-essentialist perspective on Luddism (Woolgar 1997). From this perspective, the new technical artefacts that originated the opposition by the Luddites did not have fixed attributes; instead, the artefacts became part of an existing network of actants with a distribution of power. The key question for the workers (Luddites and non- Luddites), entrepreneurs, and other actors involved was "whether and what effect and for whom could the new machinery be enrolled as allies?" (Woolgar 1997, 54). Similarly, the key questions posed in this book tackle matters of power, how new (digital) technologies can preserve or challenge the status quo, and who is represented in imagining new (digital) futures.

Zooming into the actual structure of the book, the first four chapters discuss how technologies help produce social inequality, starting with the most obvious ways of engineered inequality to more subtle forms of systemic bias such as technological benevolence. The last chapter takes a slightly different angle, as it focuses on design practices and imagining futures. Explicit illustrations of the systemic biases embedded into technologies are described in Chapter 1. These examples range from the first even Beauty AI contest to a myriad of types of social credits. A particularly interesting insight is that these technologies are usually described in terms of innovation and forward-thinking, which impact the way they are represented publicly. More concretely, current innovation narratives tend to package AI-based systems in a mystical aura that makes their decisions magically more neutral, fair, and objective than their human counterparts.

The ways in which algorithms are, and become, represented in society have an impact on which qualities and attributes become normalized and accepted; as when social media claim to know what is most important to the public through algorithmically generated "trends" (Gillespie 2012). Therefore, the "politics of representation" (Gillespie 2012, 19) become especially relevant as algorithms are increasingly considered neutral, fair, and objective in estimating, assessing, and predicting societal matters. Relatedly, the book contains many reminders that algorithms are not better than the people that create them; indeed, they can potentially be more harmful because of their scope, recursive nature, and limited accountability. A related aspect to the innovation narrative is intentionality, meaning that these systems are created with the intention of creating better worlds. However, harmful decisions can be morally covered by a rhetoric based on good intentions. Some of the recent work in critical data studies is aligned with this line of thinking and proposes that moving toward more desirable futures entails revising the current focus on individual accountabilities by, e.g., considering ways to enact public reason (Binns 2018).

Moving towards more subtle ways of discriminations, Chapter 2 focuses on instances of unfair and unjust systems that pass off as a "minor problem" (p. 77). These issues usually remain unnoticed and sometimes become visible in technologies in use. The examples in this chapter illustrate how glitches in the system are not exceptions to faulty technologies but peepholes that allow looking into the assumptions and stereotypes that are seamlessly integrated in the development and production of algorithms and data practices. One of the examples is Google Street maps reading aloud Malcolm "ten" Boulevard instead of Malcolm "X" Boulevard. This supposed "glitch" in the text-to-speech system illustrates some of the design assumptions that eventually dispossess the street name from its original legacy. From a design perspective, these "glitches" are very interesting since they can be instrumental in making concerns about discrimination visible and therefore open opportunities to imagine different futures. Indeed, making things visible is a common argument for social justice and democracy; however, is visibility always desirable?

Chapter 3 unfolds the complexity of exposing race in and through technology, and how there are cases in which visibility can be a "trap". Visibility is discussed in many different forms, from literal examples of photo cameras designed to expose "whiteness" to concerns about how visibility is enacted to predict in which geographical areas crime is more likely to happen. Many of the examples illustrate ways in which combining visibility and predictive algorithms can be especially harmful and discriminatory. Algorithmic-based predictions rely on data to make their estimations. Thus, depending on the circumstances and consequences, it might be convenient to be visible while in other cases invisibility can be an asset. The extent to which people can decide whether to be visible or remain hidden relates to issues of power and perpetuation of existing dis-

criminatory systems. This points to the importance of explicitly standing up against the "datafication of injustice" meaning that "the hunt for more and more data is a barrier to acting on what we already know" (p. 116). The rigidity associated with data processes hinders possibilities of including different points of view and representations. In this regard, Seaver (2017) has proposed tactics to enact algorithms ethnographically, which help approach them as rich sociotechnical systems rather than constrained and procedural formulas. Relatedly, there are more and more initiatives that try to imagine different worlds in which data can help produce desirable futures; however, some of them can be quite problematic.

Examples of technologies that try to "fix" the system are described in Chapter 4. These include attempts to fixing diversity, race, and health, with interesting practical examples and reflections on how some technological narratives around diversity monetize differences. Something particularly interesting is how this chapter draws a line from the Jim Crow Laws, which sought to identify people's race to discriminate effectively, to the New Jim Code, which seeks to provide technical fixes to effectively meet everyone's needs on the bases of supposedly stable group identities. The line from the Jim Crow Laws to the New Jim Code is paved with tech design imagination. Well-intended technologies can be harmful and insidious, especially if presented as agents toward better futures. Therefore, as argued in the last chapter, it is important for tech design to be aware of how race and technology shape each other. Here the book refers to many different design-related notions and terms, such as design thinking, empathy, and design justice. It feels like the starting point of another book, rather than a closure. Also, some of the arguments seem to remain at the shiny surface of what sometimes is understood as design. However, there are other substantial forms of design that might be well-aligned with many of the issues raised in the book: for example, in the context of gender, tech, and design several projects and initiatives (such as fempower.tech and femtech.dk) are trying to move away from deficit approaches to issues of gender in computing. These projects seek to challenge stereotypes and assumptions that led to the systematic and structural mechanisms that make computing an exclusive field and discipline.

In summary, *Race after Technology* is an excellent read on why it is important to decode systemic bias embedded into technologies from a *race critical code studies* perspective. The book makes a timely contribution to a growing corpus of work on critical data studies, and it might be interesting to read it in conjunction with other contemporary books (e.g. D'Ignazio and Klein 2020; Eubanks 2018). Integrating the tools of STS into *race critical code studies*, this book makes a compelling case for how race is not only a social construction, but it also constructs realities where race and technology shape one another. Many of the arguments are probably very familiar to researchers in STS; however, the examples can be

instrumental in opening up important discussions among actors such as researchers, developers, designers, students, or policymakers. Indeed, the author's clear and down to earth writing style makes this book very engaging for anyone interested in how algorithms and data practices embed forms of social injustice and how these can be considered when imagining better futures.

References

Binns, R. (2018) *Algorithmic accountability and public reason*, in "Philosophy and Technology", 31 (4), pp. 543-556.

D'Ignazio, C. and Klein, L. F. (2020) *Data feminism*, Cambridge, MA, MIT Press.

Eubanks, V. (2018) *Automating inequality: How high-tech tools profile, police, and punish the poor*, New York, St. Martin's Press.

Gillespie, T. (2012) *Can an algorithm be wrong?*, in "Limn", 1 (2).

Seaver, N. (2017) *Algorithms as culture: Some tactics for the ethnography of algorithmic systems*, in "Big Data and Society", 4 (2), pp. 1-12.

Woolgar, S. (1997) *The Luddites: diablo ex machine*, in K. Grint and S. Woolgar *The Machine at Work: Technology, Work and Organization*, Cambridge, Polity Press.

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Dalla molecola al paziente. La biomedicina nella società contemporanea [From the Molecule to the Patient. Biomedicine in Contemporary Society], Bologna, Il Mulino, 2017, pp. 179

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"From bench to bedside" is the motto of the emerging translational research in current biomedicine. In the biomedical literature, translational research is promoted as a strategic and efficient way to implement the novel discoveries of biological science in clinical practices, and to incorporate clinical observations back to laboratory science. In Science and Technology Studies (STS) and in social studies of biomedicine, translational research is addressed as a space of problematization instead, which invests important transformations in the articulation of clinical and experimental practices as well as discourses and epistemologies, the generation of novel biological entities and, finally, the making of subjectivities.