Book Review/ Compte rendu

Ferguson, Andrew Guthrie. *The Rise of Big Data Policing*: Surveillance, Race, and the Future of Law Enforcement. New York: New York University Press, 2017, p 272, $28.00 paperback. (9781479892822).

The Rise of Big Data Policing is a scrupulous and insightful book that delves into the world of American policing—a world that is increasingly shaped by new big data technologies. Andrew Guthrie Ferguson, presents the reader with a broad overview of the big data technologies that various US police services now use, and analyzes the impact these technologies have on the everyday lives of Americans.

Ferguson argues that big data technologies shape the decisions of police officers relating to who is policed, extending to decisions about where, when, and how they are policed. He convincingly demonstrates that this process is hardly unproblematic. Despite the allure of data-driven (ostensibly) impartial "smart policing"—an allure that pushes police departments to invest hundreds of millions in sophisticated algorithms of risk calculation—American policing keeps reproducing patterns of exclusion and discrimination. In fact, as Ferguson argues, Black and poor Americans are continually singled-out by algorithms as those in need of police interventions.

According to the author, there are two main sources that reproduce this systemic bias. On the one hand, the data that police gather (and obtain from the outside sources) are incomplete and "unevenly spread" (185). This can be illustrated by the following example: as numerous studies show, US police officers disproportionately stop, search, and arrest poor Black young males in searching for drugs. Information about such encounters is later transformed into data on which algorithms calculate the risk of future offences. The problem is that algorithms then associate group properties of those stopped and arrested for drug possession with higher probability of future crimes. The next time an officer opens their computer to search for information about the Black man on the street, the program will signal that there is a high probability of drug possession. Biased data, therefore, create a biased algorithm.

On the other hand—and one of the most interesting contributions of the book starts with this argument—Ferguson shows that over policing of Black and other marginalized communities is the result of extra-al-

gorithmic decisions. Namely, politicians repeatedly made policy decisions (before any algorithms were involved) to deal with social problems using remedies that are not suited to healing social wounds. To put it simply and succinctly, poor Black communities would not be overpoliced if authorities were not trying to deal with poverty and marginalization by means of policing.

Ferguson shows that there is nothing inherently racist and exclusionary in big data surveillance technologies. The problem lies in how we use them. After all, it was people's assumptions, not decisions arrived at by algorithm, which led to the belief that "big data insights" have to be "addressed by the police" (p.174). The author convincingly demonstrates that big data surveillance technologies contain dangers, and yet also open up possibilities that we can use to better the lives of the marginalized. What if, the author asks, we start using algorithms not to identify crime hotspots, but to map areas of poverty? We could use those data to allocate social services to the places that need them the most. Nothing also prevents us from sending social workers instead of police officers to people in need. Or, at least algorithms don't. And what if we use complicated camera-based surveillance systems not only to locate "terrorists," but to identify patterns of people in need? Could cameras locate people experiencing homelessness and those in distress, so that appropriate support is provided in a timely manner? Ferguson calls this "the bright data promise"—referring to data gathered by the "surveillance architecture developed to police criminal risk," but which could "be redirected to address environmental risks and social needs" (p. 13).

This approach is hardly new. Data have been gathered and used to map social problems for a long time now. Epidemiology, for instance, is famous for mapping illnesses at least since the nineteenth century. Nevertheless, I think that *The Rise of Big Data Policing* is an important and timely reminder to the contemporary North American reader: big data technologies and advanced surveillance possibilities are not "good" or "bad" *per se*, they should not be demonized as an absolute evil or praised as a tool that will solve the societal problems that we have created. Ferguson shows particularly well that algorithms often reproduce traditional problems of (American) policing: disproportional orientation towards the poor and marginalized, the need for officers to make quick decisions in an environment of insufficient information, an inability to influence root causes of "social ills," etc.

This leads us to Ferguson's other important insight. In a chapter on "blue data," Ferguson suggests another possibility that comes with the development of big data technologies. He claims that we could use them to surveil police officers, and not criminals. Perhaps somewhat surpris-

ingly, he argues that this could be done in a way that would be appreciated by officers themselves. What if we, the author argues, do not use technologies to surveil and punish individual officers, but instead use them to understand the patterns of their work? It is very possible then, he continues, that we will be able to improve their work and thus better their relations with the public. Let us say that we map the police's distribution throughout the city and make sure we do not over police disadvantaged neighborhoods. Doing so will certainly reduce tensions. Or, alternatively, what if we use new technologies to reduce the weight of responsibility that officers experience on their jobs? What if we allow them to be in constant voluntary contact with higher ranking officers? Officers could transfer video from their body cameras to higher ranking officers to consult about how to act: "Should I stop and frisk that person or will my actions break the Fourth Amendment?" The jobs of police officers may become much easier if they have the tools to consult online.

Ferguson's insights are important as they remind the reader about a fact that tends to be ignored: police officers are also hostages of the current American *zeitgeist* that assumes that social problems can be dealt with by increased policing. As a result of this notion, officers are sent to the places and spaces that they should not go, and are expected to solve problems that they cannot solve. Conflicts that involve people with mental health problems are hardly well dealt with by officers. And even if they are handled well, officers rarely can do much more than temporarily remove the ill person from the space where the conflict or disturbance happened. Officers also hardly have the tools to help a trespassing homeless person who seeks warmth, a poor person that needs food, or a drug-addicted citizen that needs medical help. In this respect, "blue data" may at least reduce pressures that officers experience while trying to do their difficult jobs.

Despite my praise of *The Rise of Big Data Policing*, it is important to note that the book is lacking in a few respects. First of all, *The Rise of Big Data Policing* is constructed as a summary of existing information on police use of big data surveillance technologies. Ferguson did not conduct empirical research and drew most of his information either from existing published research or journalistic texts. This compilation leaves the author with no choice but to paint his picture with rather broad brushes. Throughout the book, he moves from one big data project to the next, from city to city, without delving into the details and the on-the-ground complexities of human-technology interactions. If such specifics arise in the text, it is because he refers to research done by others (see references to Sarah Brayne's research on p. 110, for example). Furthermore, because he does not rely on an empirical study (and because few other

empirical studies on the matter exist), it often seemed that Ferguson had to build his analysis of various technologies from the official descriptions provided by designers and engineers. All too often I found myself reading what seemed to be "how-it-is-designed-to-work" accounts of technologies, with the actual daily uses of such devices by police officers mostly remaining outside the scope of this book.

The book will be of use to anyone interested in interrelations between policing and developing technologies. Because the book provides a broad overview of the impact big data technologies have on the police, it may be used for teaching graduate courses on surveillance and policing.

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