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Anthropology Book Forum

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CRAWFORD, KATE 2021, *Atlas of AI: Power, Politics, and the Planetary Costs of Artificial Intelligence*, New Haven: Yale University Press, 336 pp., ISBN 978-0-30026-463-0

On March 22, 2023, The Future of Life Institute wrote an open letter to all the labs developing AI technologies and appealed to them to pause “giant AI experiments” for at least six months. The authors and signatories of the letter tell us that AI developing companies are locked in an endless race to develop new systems that no one, including their developers, understand. Nevertheless, the letter failed to raise fundamental questions about power and freedom concerning these AI technologies in our current moment. Just like human methods of governance and population control, AI assisted technologies are increasingly being used to surveil, contain, and profile vulnerable populations. Therefore, instead of solely focusing on potential threats to our liberty and autonomy in the future, it is necessary to critically evaluate the meaning of freedom and rights with regards to these technologies in the present.

It is this orientation toward AI technologies that Kate Crawford’s book *Atlas of AI: Power, Politics, and the Planetary Costs of Artificial Intelligence* introduces us to at this epochal moment. The mainstream discourse about AI is surrounded and shrouded in enchantments; we know of AI systems as unknowable and beyond our comprehension, yet at the same time deterministic in a way that they surface patterns that can be applied with predictive certainty to shape everyday life. When we think about artificial intelligence as an omnipotent being devoid of any material context, it gives it a certain magical and theological quality. Crawford points to other unequal and material histories of AI that we have been led to forget due to “strategic amnesia” (26). Through this relational and material analysis of planetary computation, the book so cannily problematizes the conception of AI as intelligent and artificial; it is not artificial because it is made up from earth’s

deepest layers and neither is it intelligent because it is fed and trained on the data that humans produce.

The Atlas of AI is a timely intervention in the emerging wave of socially attentive and critical scholarship in the Science and Technology Studies field. Crawford's book compliments Safiya Nobel's *Algorithms of Oppression* (2018), Ruha Benjamin's *Race After Technology* (2019) and Shoshana Zuboff's *The Age of Surveillance Capitalism* (2020). All of these works challenge and unearth assumptions about AI as a neutral, equal and just technology and bring forward the discriminatory, unequal, and racist codification of social problems under modern computation. Crawford's book differs from the aforementioned works because it points towards the planetary material infrastructures and labor that is required for modern computation and AI technologies to work on a global scale.

With an interdisciplinary background in computer science and cultural studies, Crawford divides her book around the themes of "Earth," "Labor," "Classifications," "State," "Affect," and "Power." While the discussions in these chapters are historically informed, theoretically rich, and ethically attentive, the power of Crawford's work lies in framing her chapters through her field journeys to multiple and disparate sites. These sites include warehouses, mines, government archives, immigration centers, police stations, and museums. By talking about mining of lithium that power computers and smartphones, the underpaid Mechanical Turk workers, who continuously build, maintain, and test AI systems through crowd work and the billions of dollars private and public investment into surveillance infrastructure, Crawford provides valuable insights into contemporary AI infrastructures' material sites and political economy.

Although atlases are colonial devices to school the eye and help empires intervene in contested spaces in order to draw borders directly, Crawford invokes the atlas to suggest "that we need new ways to understand the empires of AI" (10). In Chapter 1 "Earth," by narrating her journey on a minivan from the heart of San Francisco to the mining sites of Clayton Valley in Nevada, where an "underground lake of lithium" now proffers "the stuff" of which AI "is made" (24–25), she documents the harmful environmental practices involved in the mining of lithium that powers computers on a global scale. Although these two spaces are geographically close, Crawford

forcefully illustrates how far apart they are regarding wealth. As the tech giants situated in San Francisco became more and more wealthy and the city a tourist attraction, people forgot that all of this would not have been possible without mining lithium and in return destroying ecologies and uprooting populations of Clayton valley.

Through such journeys, Crawford rejects the dominant discourse about AI as an immaterial technology inhabiting the proverbial “cloud.” In this sense, AI is a registry of power (8), which continues to remap, contaminate, and uproot ecologies and communities by taking the form of “politics by other means” (20). From the lithium mining in Nevada required to power computation to the trees in Malaysia harvested to produce latex for the transatlantic undersea cables, fundamental to the planetary extraction which is required to power AI infrastructures is human labor. Thus Chapter 2 is focused on the brutal realities of mining and iPhone factory suicides from which we are so detached due to the spectacular display of endless software and hardware innovations. By documenting the strict work practices under the gaze of surveillance technologies in Amazon warehouses, Crawford brings forth the harsh labor conditions that are required to maintain “the myth of automation” (65). Detailed discussions about the theories of Jeremy Bentham, Charles Babbage, and Henry Ford in this chapter provides the necessary historical perspective regarding the management and disciplining of workers.

Chapter 3, titled “Data,” elaborates how the unlimited collection and capturing of data without our informed consent to train AI systems on a planetary scale has become “moralized” (112) and it amounts to a “capture of the commons” (119). Though this chapter does an excellent job at introducing the readers to everyday data practices that we are part of, it is in no way a comprehensive take on the vast world of data that machine learning algorithms require.

The subsequent two chapters on the atlas of AI deal with the classifications and affective technologies that this mass data makes possible. By analyzing mugshots from “Special Dataset 32” and face recognition data, Crawford argues that these systems’ classifications and detections are not objective. These neutral technologies impose existing social orders and magnify inequalities. As AI systems require increased data for “learning” and as Big Tech companies push the logic of “bigger is better” (43) to increase their profits, the research field of AI has become strategically blind to ethical concerns.

The last node on the atlas of AI is “State.” In this chapter, Crawford takes us into the fascinating and horrifying world of AI under the command of the nation-state. By charting the history and evolution of public-private partnerships in the development of AI technologies, she maps out the geo-political landscape of the twentieth century and the genealogies of cyber warfare.

In a powerfully written conclusion, Crawford says, “over and over, we see the ideology of Cartesian dualism in AI: the fantasy that AI systems are disembodied brains that absorb and produce knowledge independently from their creators, infrastructures, and the world at large. These illusions distract us from the more relevant questions: Whom do these systems serve? What are the political economies of their construction? Furthermore, what are the wider planetary consequences?” (215). At the core of Crawford’s book is a message that artificial intelligence is not an objective, universal, or neutral computational technique that makes determinations without human direction. Its systems are embedded in social, political, cultural, material and economic worlds, shaped by humans, institutions, and imperatives that determine what they do and how they do it. Chapters like “Classifications” show us that these technologies are designed to discriminate, to amplify hierarchies, and to encode narrow classifications. When applied in social contexts such as policing, the court system, health care, and education, they can reproduce, optimize, and amplify existing structural inequalities. This is no accident: AI systems are built to see and intervene in the world in ways that primarily benefit the states, institutions, and corporations that they serve. In this sense, AI systems are expressions of power that emerge from wider economic and political forces, created to increase profits and centralize control for those who wield them.

Although Crawford never terms her disparate but connected fieldwork as ethnography, she explains it more in terms of journeys to various parts of the world that can unearth the material sites of AI. These journeys provide different nodes throughout the book on which we as anthropologists can expand and bring forward more locally specific and grounded ethnographies of AI and the various infrastructures associated with it to better understand the questions of power and discrimination that algorithms are perpetuating. For example, Vijayanka Nair’s *An eye for an I: recording biometrics and reconsidering identity in postcolonial India* (2018) and Ursula Rao’s *Biometric Bodies, Or How to Make Electronic Fingerprinting Work in India* (2018) around India’s

Biometric ID and Aadhaar scheme for welfare services bring forward the more intimate and micro effects that the interaction of AI assisted technologies and humans are producing.

My name is **Zahid Ali** and I am a first year PhD student in the anthropology department of Rice University. My research questions lie at the intersection of the violent encounter between fossil fuel modernity and the desert life in Thar, Pakistan. Through ethnographic exploration, I aim to understand how mega development projects in the context of coal-powered energy infrastructures shape and reshape everyday life in the Thar desert. My focus is to study the ways in which the desert space is produced as a global resource for exploitation while simultaneously serving the dual purpose of entrenching state power and developmental regimes.



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