BOOK REVIEW

Artificial Whiteness: Politics and Ideology in Artificial Intelligence Yarden Katz (2020) viii+340pp., US$28 paperback, Columbia University Press, New York, ISBN 978-0231194914

Does technology come into existence *tabula rasa*? Yarden Katz's *Artificial Whiteness* is a compelling argument that technology, specifically artificial intelligence (AI) does not come into existence without an ideology. Katz uses his background in the brain and cognitive sciences and his work at Harvard Medical School to speak to the process. The book is broken into three major sections: Formation (chapters 1–2); Self and the Social Order (chapters 1–5); and Alternatives (chapters 6–7). In the introduction, Katz frames the foundation for the understanding of AI as a nebulous notion that serves the ideology of white supremacy (p.9). There are two major claims:

1. AI is a technology that serves whiteness by advancing its imperial and capitalist projects. In the hands of a flexible expert industry, AI has been used to advance neoliberal visions of society, sanction projects of dispossession and land accumulation, and naturalize mass incarceration and surveillance. These projects are assisted by AI's epistemic forgeries, which include the notions that AI practitioners offer a universal understanding of the self and that their computing systems rival human thought.
2. AI performs this service by mimicking the structure of whiteness as an ideology. It is isomorphic to whiteness in being nebulous and hollow, with its shifting character guided by imperial and capitalist aims. In computer parlance, AI's nebulosity is a feature, not a bug. Nebulosity has made this endeavor amenable to reconfigurations in the service of powerful interests. Like whiteness, it aspires to be totalizing, to say something definitive about the limits and potential of human life based on radicalized and gendered models of the self that are falsely presented as universal.

Chapter 1 traces the formation of AI and its roots in the American military academy. This begins in the 1950s and continues until 2009. The primary argument that Katz presents is that AI was formed to serve the imperial aims of the military and defense departments. Chapter 2 examines how the concept of AI was rebranded for public consumption in the 2010s. At this time, the technology industry was under fire as Big Tech capitalism, and also in need of rebranding. In Chapter 3, Katz introduces the reader to what he calls 'epistemic forgeries'. An epistemic forgery, according to Katz, is a counterfeit or representation which serves a political end. There are three major forgeries that Katz addresses in the book. First is 'A view from nowhere', a representation of AI that is without historical context or political agenda. The second forgery is that AI has equaled or has surpassed the capacities of human thought. Katz writes:

> In the rebranded AI, this forgery was given a new wind by commentaries that suggest human-level machine intelligence is either looming or already here. Experts and the media routinely report on 'AI systems' outdoing people in a range of activities, such as recognizing images, detecting emotions, or playing video games. (p.117)

Katz notes how these vague references and blatantly false depictions of what AI can do are in essence a projection of technology companies wishing they could achieve universality in AI, which is far from the current reality.

The final forgery is that machines will rival human cognition independently of humans. The initial question of machine intelligence was: Could a computer ever think like a human or equal

human intellectual ability? Katz points out that this question stems from neoliberal economic theory and behaviorist psychology. This forgery is important because it absolves capitalists of accountability, an AI system is driving the market and no one entity can be held responsible. These systems outdo us in ways we cannot follow, and so we must yield to them just as we must yield to the market.

Chapter 4 teases the fine lines between critical perspectives on AI ethics and social movements that call out the systemic racism embedded in AI. Katz uses the current legal system in the US as a case study: 'Critical AI experts erase institutional violence by packaging epistemic forgeries from the computing world with a progressive-sounding discourse on social justice' (p.135). Again, Katz shows how this reframing creates ambiguity and a responsibility gap.

The next chapter, 'Artificial whiteness', goes back to the original questions of what AI is and how it develops into an ideology of colonialism. Katz traces the journey of AI through imperial conquest. 'Artificial whiteness' returns to the original question posed at the beginning of the work: What is artificial intelligence? AI, according to Katz, is a guise to cloak the whiteness embedded within the technology. Yet, it is difficult to describe AI because it has been rebranded to flex and form certain political interests. While the nebulous is invisible to the uninformed, the damage is observable by all people. The white voice claims that AI brings a bright future and quality of life for all those who accept it. However, the results of embedded whiteness eventually come to light. For example, Joy Boulamwini's work on the racial and gender bias in facial recognition displays 'white gaze', which is the widely used software that failed to recognize her black skin. At the end of the chapter, Katz gives a succinct summary of the link between AI and whiteness: 'Like whiteness, AI is nebulous, chasing to meet new condition and challenges. Like whiteness, AI is hollow; its meaning derives largely from the imperial and capitalist projects that sustain it. The basis of AI reveals the white fragility of those invested in a technology of power.' (p.154).

Chapter 6 analyses alternative visions of AI and the science of the mind/body that dominates the field. Katz uses autopoiesis as a lens to explore dissenting vision. Autopoiesis, according to Katz 'is how a living system maintains itself as a "unity": an entity that inhabits a boundary of its own making. The simplest unity is a single cell, which must re-create itself (by remaking its membrane, for instance) to stay intact' (p.195). The vision of AI and, more recently, robotics is in a 'militarized frame'. Behind the visions of Rodney Brooks and Andrew Ilachiniski is an epistemology of war. On the face it, their research presents a vision of revolutionary potential ushered in by AI and robotics. But underneath this veneer is an imperialistic dream of embodied war.

> Whereas prior 'Newtonian' conceptions of the battlefield were 'closed system', 'stable', 'predictable', 'reductionist', and premised on, linear causation, the Heraclitan formulation was 'open', 'dynamic', 'unpredictable', 'holistic', and premised on 'circular causality', concerned not with 'being' but 'becoming'. (p.213)

In essence, AI and robots provide the military with a decentralized asset to engage enemies, but also a new layer to hide imperialistic endeavors as these actors continue the projects of their makers.

In the final chapter, Katz concludes that 'the ideology of whiteness is backed by institutional power and a long history, resisting it is not simply a matter of individual choice, as so many have pointed out' (p.229). So, what does Katz want the reader to take away from this work? Katz proposes a disinvesting in AI and 'its epistemic forgeries, as well as the expert industry and institutions that sustain it' (p.229). Refusal is the response that Katz would like to see, from both the academy and the individual. Katz concludes with some commentary on Herman Melville's *Moby-Dick*. He concurs with Toni Morrison's interpretation that the white whale represents whiteness. In the words of Morrison, 'Melville's truth was his recognition of the moment in America when whites became ideology' (p.232). Katz believes that refusal is only the beginning of the journey towards dismantling whiteness. Like the *Pequod* in *Moby-Dick*, we must refuse the offerings of capital and empire continually put before us.

Now to evaluate the content of *Artificial Whiteness*. On style and presentation, the work is well-written and arranged in a manner that is complementary, each chapter pointing to arguments that lie ahead. Katz's work is an attempt to dismantle the propaganda that encapsulates the creation and development of what we know today as AI. The book is a cross-disciplinary exercise that draws from Katz's experience with cognitive science, literary analysis and computer science. The voice presented is unique, especially in the light of the growing body of literature around AI ethics. In essence, AI needs to be decolonized or in the language of Katz 'refused'. Before we consider refusing AI, it is necessary to explore whether AI operates largely in the service of whiteness?

By whiteness Katz does not simply mean a phenotype, one's skin pigment or nationality. Katz has to mention this on page 8 of the introduction. One should not have to introduce an uncommon definition or an esoteric use of a term. That said, I think the redefining of the concept of whiteness is needed and worthy. Other scholars in the fields of psychology and philosophy have noted that the science of race is built to serve an ideology and advance the oppression of one group of humans over another (e.g., Smith, 2020). Katz seems to follow a similar logic by seeing whiteness as an ideology that advances the interests of a select group over the interests of others. I agree with Katz's assessment of race science and that AI is another tool in the hands of whiteness in advancing imperialism. Why is this so important? Unless the veil is taken off AI and the public can see it for what it is, there is no one to blame or hold accountable when algorithms and systems go awry. In fact, by presenting AI as an objective lens with which decisions can be made, the military and capitalistic investors can exploit the responsibility gap. My concern with Katz's premise is that it is so far outside current social thinking about race that it will be easy to dismiss altogether. People should certainly not dismiss what Katz has to say about white supremacy, but in a Western context many will struggle with how he uses white in his work. To be fair, it is not Katz's intention to restructure social epistemologies on race or unpack the complexity of race science in his book. Katz draws on the work of Theodore Allen, Gerald Horne, Cedric Robinson, Ruth Frankenberg and Matthew Jacobson to show that whiteness is more than a phenotype. The reader will need to consult such authors to see the capitalistic and imperialistic mingling found in white supremacy. Perhaps it is unfair to ask Katz to serve as a primer on racial regimes – he is assuming the reader will find and read other sources on this topic. However, this assumption does limit the scope of readership for Katz.

Is whiteness an ideology? In a sense, but at the root of the problem is not mere capitalism or imperialism, but human nature. Katz's premise is close to the core of the axiological assumptions found in white supremacy, yet the term 'whiteness' occludes the thesis and will prevent many from engaging with such wonderful work. Although I by no means wish to say greed and power may not be fundamental to human nature, there is something in human nature that seeks self-preservation, the pursuit of desires and often a refusal to consider all humans as equal. Social and environmental factors are responsible for demographics that encourage us to see others as less important, and limited exposure to worldviews persuades us that our own views are more important than theirs.

Is AI merely a tool in the hands of the military-industry complex? I think it is fair to say yes; AI, much like any other technology, is often going to get the most funding if it has a defense purpose. This is hardly unique to AI. Katz says that the US military is always on the prowl for new war technologies, but there is a soft underbelly here. War fuels research and this research opens up the largest job market in the US (over 140 million civilians). The US military is not a self-contained ecosystem. There is a complexity here. On one hand, there is research that is going to impact the safety of soldiers and their effectiveness in combat, and on the other hand, there is research that is going to help preserve the US economy. I believe Katz sees this, but his emphasis is on the cost of allowing AI without accountably. For example, the Center for International Security and Cooperation, has noted that the US military has and currently runs a program called the Collateral Damage Estimation Tool (CDET) or 'bugsplat'. This program and others like it outsource ethical predictions to an algorithm that relies on theoretical data (Emery, 2022).

In his conclusion Katz states that society should refuse AI and cease further study, including fields of AI ethics and all related endeavors. My questions to Katz through correspondence are:

How should the lay person participate in this refusal and what does this look like? He writes in response:

> It's difficult to answer this question in the abstract, without knowing who these lay persons are and their broader political commitments. Part of my point in the last chapter is that AI has to be seen as part of broader political institutions and projects and that resistance has to be grounded in existing resistance to those larger projects. I think that the politics of refusal and withdrawal that I reference do point to different ways of handling AI. It's possible, for one, to refuse the concept and to denaturalize its use, in the same way, that things like IQ and eugenics have been sometimes refused and interrupted (though that's certainly an ongoing battle).[1]

For this refusal to become a reality several components must come together. First, the public must become aware that AI has a political agenda and end. This will be a struggle, at least initially, because the average American is not going to find or read Katz's book. I believe this is unfortunate for the work is extremely valuable for both academics and consumers. Unless one is inside of the world of AI ethics, it is unlikely that one will have heard about AI bias and the oppression of algorithms. Again, this is not Katz's problem to solve, but a commentary to help the reader see that by reading Katz's work we must become evangelists. It is now the responsibility of the reader to pass on the warnings of Katz's book. I believe this will not only help challenge the axiological assumptions of academics about race and AI, but also the assumptions of lay readers. Katz demonstrates clearly that AI is not unbiased and this builds further upon the works of Safiya Noble (2018) and Ruha Benjamin (2019). While this seems like a major hurdle to overcome, the horizon looks bright because more and more work shows how AI and technology have encoded inequity. Society must think deeply about how our consumer habits shape the economy and take responsibility for the creations we make.

The last component (and I believe this is the hardest part of the refusal proposal) is refusing to consume or participate in the military-industrial complex (via AI). While I sympathize with Katz's proposal and believe he is sincere in his argument, I am not convinced his is the best path forward. Also, I am not sure that this thesis is realistic. Much like issues of race, the path forward should not merely ignore the existence of ideologies of white supremacy, but seek to educate and reform. If the public is informed, it can demand ethical regulation of certain technologies. Abstract theories of refusal may be doomed to failure. Katz is right: AI comes with bias and a military agenda, but how are the millions of US employees going to respond to this refusal? If the public accepts Katz's thesis and fully embraces his call to refusal, it would cost US military personnel roughly $146 billion in income. Where are these families going to find similar income and benefits? I am not arguing that Katz is wrong, but that there are serious and practical components to this refusal that makes it unlikely. So, what should be done?

I believe the best route forward is regulation. With a strong international approach to regulation, AI and robotics can work to serve human flourishing. There is both a need for public bodies of regulation as well as governmental oversight that ensures private companies (and, yes, even the military) are not using AI for capitalistic and imperialistic ends. Jacob Turner (2019) has written a monumental work on this very process. *Robot Rules: Regulating Artificial Intelligence* argues that AI has penetrated the world and brings forth unique features that current legal systems will not be able to address with clarity. Thus, instead of calling the public and academic world to refuse AI, the reader should advocate new regulatory bodies to address the unique features of AI and robotics. Turner lists three main challenges ahead:

1. Responsibility – if AI were to cause harm, or to create something beneficial, who should be held responsible?

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[1]Yarden Katz, email correspondence with author, April 2021. Katz attached the following link for further discussion: https://digilabour.com.br/2020/01/16/ai-whiteness-and-capitalism-interview-with-yarden-katz/.

2. Rights – are there moral or pragmatic grounds for granting AI legal protections and responsibilities?
3. Ethics – how should AI make important choices, and are there decisions it should not be allowed to take?

Turner argues (and I agree) that we should work toward building structures for the legal regulation of AI as we seek to develop a more long-term solution to the problems ahead. Thus, more academic work on AI and ethics is needed, not less. More scholars must help the public see the existential risk and the bias behind the technology. That said, Katz's work is laudable and worthy of consideration for those looking to understand the history of AI and the complexity of building technology devoid of human ideology, especially whiteness. Katz's work will best serve the graduate-level reader as supplementary reading in ethics or current cultural issues.

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