Automated Anti-Blackness: Facial Recognition in Brooklyn, New York

Mutale Nkonde

Mutale Nkonde is the founding CEO of AI for the People (AFP), a nonprofit creative agency. Only 1.4 percent of researchers working in public interest tech are Black. AFP's mission is to increase Black representation in the field of public interest tech by 2030 by using journalism, television, film and music to challenge dominant narratives about the assumed neutrality of advanced technological systems. Prior to her work with AFP, Nkonde worked in AI Governance. During that time, she was part of the team that introduced the Algorithmic and Deep Fakes Algorithmic Acts, as well as the No Biometric Barriers to Housing Act to the United States House of Representatives. She started her career as a broadcast journalist and worked at the BBC, CNN & ABC. She also writes widely on race and tech, as well as holds fellowships at Harvard and Stanford.

It is a cold windy night in mid-November when I arrive at Atlantic Towers in the Brownsville section of Brooklyn, New York. Atlantic Plaza Towers is made up of 718 rent-controlled units spanning two buildings that sit side by side facing Atlantic Avenue, a major thruway connecting East Brooklyn and Queens.[1] Atlantic Plaza Towers is owned by the Nelson Management Group (NMG), a property management company that manages 13 apartment buildings across New York City.[2]

I am here to meet Tranae' Moran and Fabian Rogers. Moran's family has lived at the Atlantic Plaza Towers for generations. Both Moran and Rogers are floor captains, acting as liaisons between the people on their floors and the property's tenant's association. Over the last year Moran and Rogers have been protesting against the introduction of facial recognition to Atlantic Plaza Towers.[3] Tonight they are acting as my gracious hosts. I decided to come to this meeting after their representatives at Brooklyn Legal Services connected me to them via email, and l explained l wanted to feature their work in this article. The flyer they created to advertise the event billed it as "a community forum on the issues surrounding facial recognition." I found this intriguing because much of the advocacy around banning the use of biometric technologies that I have been exposed to is often done for the Black community, but rarely driven by Black people.

Atlantic Plaza Towers was purchased by the NMG in 2006.[4] Since then, the property has undergone extensive renovations. Each building has a beautiful, well-lit facade, and guests are greeted by a security guard. Tonight, in order to gain entry to the building l am buzzed in through two security doors before reaching the front desk. Once l reach the desk, a security guard asks for my ID. The guard glances at the picture on my ID and then my face before buzzing me through a final door, giving me access to the lobby. The commu-

> [S]ociologist Michael P. Jefferson used the term anti-Blackness to describe the 'debasement of [B]lack humanity, utter indifference to [B]lack suffering, and denial of [B]lack people's right to exist.'

nity meeting is taking place in a large room at the back of the building. As I walk in, a sea of multi-generational Black faces look up to see who has just come in. Atlantic Plaza Towers is home to multiple generations of the same families. Some people smile, others say hello, and at least three people urge me to get something to eat.

Brownsville is home to the highest concentration of public housing in New York City.[5] The median household income is approximately $26,400 and the neighborhood has a 39.9 percent poverty rate.[6] In 2015, Brownsville's population was 70 percent Black and 25 percent Latinx.[7] Though not public housing, Atlantic Plaza Towers is rent controlled and houses a number of Section 8 recipients. 90 percent of the residents are people of color.[8]

Due to their own racism and classism, some people might write off this community

as unsophisticated, but they would be mistaken. I am sitting in a room with at least 75 other Black people discussing the privacy implications of biometric technology. The conversation does not quiet down until a local assemblywoman starts to discuss the paperwork the tenant's association filed with a New York agency to stop NMG from installing facial recognition technology at the entrance of Atlantic Plaza Towers.[9]

How Facial Recognition Technology Works

During the tenant's association meeting, I find out the cameras currently in the Atlantic Plaza Towers building are being used to take pictures of tenants performing everyday tasks. If the tenants engage in a minor infraction—for example, not separating recycling—management sends them a picture of the infraction and issues a fine, a practice which is illegal in New York State.[10]

The facial recognition (FR) technology that NMG wants to install would take pictures of people's faces and match the picture against the images of people in an approved database.[11] FR systems are part of a host of biometric technologies being sold as security solutions within the residential housing market. The data used to train facial recognition systems to be able to match a face to a picture is made up of tens of thousands of digital images of people's faces which, under current law, can be mined from anywhere.

Automated Anti Blackness

There is historical precedent for technology being used to survey the movements of the Black population. In 1713, New York passed the Lantern Law which demanded that any

enslaved person over the age of 14 carry a lantern at night so they could be easily seen by White people.[12] Much like Nelson, at the time New York City legislators associated Black people with crime. This use of lanterns, which were the cutting-edge technology of the day, mirrors the proposed use of facial recognition technology at Atlantic Plaza Towers. I view both of these cases as examples of anti-Blackness in policies.

In a 2014 op-ed published by the Washington Post, sociologist Michael P. Jefferson used the term anti-Blackness to describe the "debasement of [B]lack humanity, utter indifference to [B]lack suffering, and denial of [B]lack people's right to exist."[13]

Automated anti-Blackness is a particularly potent form of racism because it is enabled by data driven decision making, which is assumed to be objective. How-

> *Given the subjective way in which algorithms are designed, the accuracy of facial recognition systems not only relies on the training data but also on the people who are creating the algorithms because FR systems 'see' through the eyes of their creators.*

ever, data scientist Cathy O'Neil argues that algorithms are not objective in nature. In her book *Weapons of Math Destruction*, she reveals the subjective manner in which developers decide which inputs to use in the algorithm design process and what weight to give to each factor.[14] She concludes technical systems become encoded with biases of their creators because algorithms are simply opinions written into code.[15]

Given the subjective way in which algorithms are designed, the accuracy of facial

recognition systems not only relies on the training data but also on the people who are creating the algorithms because FR systems "see" through the eyes of their creators. This can create problems for tech companies that lack employees who are racial minorities. I recently conducted a diversity audit of Google and Facebook's Artificial Intelligence (AI) research teams, and found they had one and zero Black members respectively.[16] In addition to having little racial diversity on teams responsible for AI, tech companies working with facial recognition systems often find it difficult to obtain datasets with Black faces. One solution employed by a Google contractor was to offer Black homeless men in Atlanta $5 gift cards to scan their faces.[17] This may diversify the dataset, but it is deeply unethical.

The way in which algorithms generate discriminatory outputs is often referred to as bias. However, the term "bias" does not speak to the unique ways AI technologies are weaponized against African American communities and reproduce historical patterns of racism. This is an argument put forward by Simone Browne on her seminal work on the history of surveillance *Dark Matters*.[18] This phenomenon Browne uncovered can clearly be seen in facial recognition technology.

In 2018, computer scientists Joy Buolamwini and Timnit Gebru published a paper exploring how accurate commercially available FR systems were at identifying gender.[19] The systems were accurate 99 percent of the time when identifying lighter-skinned men, but the darker the skin of the person, the less accurate the FR systems were—gender was misidentified in 35 percent of photos of darker-skinned females. This begs the question: are these facial recognition systems for all people, or just White people?

The expression of racial bias by FR systems was further explored by the American

Civil Liberties Union (ACLU). In the same year the Buolamwini and Gebru report was released, the ACLU ran a test to assess the accuracy of Amazon's consumer recognition software, Amazon Rekognition.[20] The ACLU's test compared images of members of Congress with a database of mugshots.[21] Rekognition identified 28 members of Congress as other people with criminal records.[22] The misidentification rates were disproportionately high among the Black members of Congress.[23] Nearly "40 percent of Rekognition's false matches in [the] test were of people of color, even though they make up only 20 percent of Congress.[24] The FR system's misidentification of innocent Black men and women as people who had been convicted of crimes is an example of automated anti-Blackness.

The lack of meaningful regulation of biometric data means building managers could argue they want facial recognition systems to consider criminal history as a factor when making decisions about building access. Residents living in buildings using FR systems that are connected to a database with mugshots may be misidentified as persons with criminal histories, which could cause the person to be denied entry and—if the building works with law enforcement—unjustly detained.

The Use of Facial Recognition by the Government

Despite issues with accuracy and a lack of market testing, governments across the world are increasing their spending on facial recognition technology.[25] Taxpayers in the United States are therefore paying for AI systems that have been shown to discriminate against people on the grounds of race. What makes this worse is it is hard to hold FR developers accountable for their flawed systems because FR algorithms are protected by intellectual property (IP) laws. This lack

> *The FR system's misidentification of innocent Black men and women as people who had been convicted of crimes is an example of automated anti-Blackness.*

of transparency creates a power imbalance between developers, who are typically private contractors, and policy makers, who use public funds to procure AI systems.

Regulating Artificial Intelligence

Given the emergent nature of most AI technologies, impacted groups are the experts on how AI systems can marginalize certain populations. In order to generate the political will needed to regulate these technologies, I strongly recommend the adoption of a design justice framework.[26] Design justice is a theory developed by communications scholar Sascha Costanza-Chock.[27] She found that by centering impacted groups in the design process and focusing policy interventions on the impact—in our case the error rate with facial recognition systems—rather than their intention, policy makers can create frameworks that dismantle systems that reinforce anti-Black racism.[28] The adoption of design justice thinking makes way for the co-creation of AI policy with community groups.[29]

Co-creation is a theory documented by Katerina Cizek, William Uricchio, and Juanita Anderson at MIT. Co-creation often happens within communities, across disciplines, and increasingly with living systems and AI.[30] Co-creation confronts power

systems that perpetuate inequality and offers alternative, open, equitable, and just models of decision-making, rooted in social move-

> *[B]y centering impacted groups in the design process and focusing policy interventions on the impact—in our case the error rate with facial recognition systems—rather than their intention, policy makers can create frameworks that dismantle systems that reinforce anti-Black racism.*

ments."[31] In this case the power is concentrated with private companies developing facial recognition systems. Co-creation within communities in order to tackle the issue of racial bias in FR systems would create a path to develop socially just polices that can regulate biometric technologies.

Moving Forward

Utilizing both the design justice framework and the co-creation frameworks has been extremely effective for tenants in the Atlantic Plaza Towers. Press about the use of facial

> *Co-creation within communities in order to tackle the issue of racial bias in FR systems would create a path to develop socially just polices that can regulate biometric technologies.*

recognition technology at Atlantic Plaza Towers centered the stories of tenants living in the building. The negative PR that ensued moved policy. The first policy shift was NMG withdrawing its application with a New York State agency to install FR units in the building.[32] Second, local politicians are taking up these issues in the legislature. The call for regulation was answered by both state Assemblywoman Latrice Walker and Congresswoman Yvette Clarke, both of whom introduced the No Biometric Barriers to Housing Acts to their legislatures.[33] The centering of community voices birthed a movement in New York State to ban facial recognition in public spaces bringing New York in line with other anti-facial recognition movements across the country.

Moving forward, I have the below recommendations for regulating facial recognition systems in New York State housing:

1. Demand government vendors conduct impact assessments on all algorithmic decision making technologies—a regular evaluation of the tools for accuracy, fairness, bias and discrimination.[34] If any facial recognition system is found to have **any discriminatory impact**, the use of FR technology should be banned within any properties under New York City Housing Authority control.

2. The New York City Housing Authority should create an Office of Science & Technology to house a team of public interest technologists who are charged with the oversight of how emergent technologies are used within the agency.[35]

3. The enforcement of a five-year moratorium on the use of facial recognition technology in public housing, in order to conduct an independent investigation into emails dating back to 2009 relating to the use of FR in properties under New York City control. This investigation should be conducted by an independent group

of public interest technologists that is made up of, but not limited to, residents of each building currently using FR technology, computer scientists, sociologists, artists, anthropologists, legal scholars and practitioners, as well as activists from jurisdictions that have banned the use of facial recognition in public spaces.

Facial recognition technologies are only one example of biometric systems being used by the public sector. For example, the New York Police Department's (NYPD) uses ShotSpotter technology, a listening system that uses algorithms to identify gunshot sounds.[36] Once the system detects a gunshot it starts recording, and the recording is then sent to a monitoring facility, then shared with local law enforcement agencies.[37] This has raised questions around whether this constitutes a warrantless search, which is a violation of fourth amendment rights.[38] To fully protect Black people from automated anti-Blackness, policy makers need to enact comprehensive privacy laws that cover all uses of biometric data in public life.

Endnotes

1. "Nelson Management Group Portfolio," Nelson Management Group, n.d. https://nelsonmanagement group.net/nmg-portfolio/.

2. "Nelson Management Group Portfolio"

3. Yasmin Gagne, "How we fought our landlord's secretive plan for facial recognition—and won," *Fast Company*, https://www.fastcompany.com/90431686/our-landlord-wants-to-install-facial-recognition-in-our-homes-but-were-fighting-back?partner=feed burner&utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+fastcocreate%2F feed+%28Co.Create%29.

4. "Atlantic Tower Plaza," Nelson Management Group, n.d. https://nelsonmanagementgroup.net/port folio/atlantic-plaza-towers/.

5. Yasmeen Khan, "Brownsville: No Label Necessary," *WNYC*, 29 January 2018.https://www.wnyc.org/story/brownsville-no-label-necessary/

6. "BK16: Brownsville," NYU Furman Center, n.d. https://furmancenter.org/neighborhoods/view/browns ville

7. Ibid.

8. Sarina Trangle, "N.Y. Brownsville Tenants Push Back on Facial Recognition Plan," Government Technology, 2 May 2019. https://www.govtech.com/products/NY-Brownsville-Tenants-Push-Back-on-Facial-Recog nition-Plan.html.

9. Ibid.

10. "Tenant Rights," NY.gov, n.d. https://ag.ny.gov/sites/default/files/tenants_rights.pdf

11. Rebecca Heilweil, "Tenants sounded the alarm on facial recognition in their buildings. Lawmakers are listening," *Vox*, 26 December 2019. https://www.vox.com/recode/2019/12/26/21028494/facial-recogni tion-biometrics-public-housing-privacy-concerns

12. Ethan Chiel, "New York City has been shining surveillance lights on its black population for the last 300 years," *Splinter*, 19 May 2016. https://splinternews.com/new-york-city-has-been-shining-surveillance-lights-on-i-1793856900.

13. Michael P. Jeffries, "Ferguson Must Force Us to Face Anti-Blackness," *Boston Globe*, 28 November 2014. https://www.bostonglobe.com/opinion/2014/11/28/ferguson-must-force-face-anti-blackness/pKVMpGx wUYpMDyHRWPln2M/story.html

14. Mona Chalabi, "Weapons of Math Destruction: Cathy O'Neil adds up the damage of algorithms," *Guardian*, 27 October 2016. https://www.theguard ian.com/books/2016/oct/27/cathy-oneil-weapons-of-math-destruction-algorithms-big-data

15. Chalabi, "Weapons of Math Destruction"

16. Mutale Nkonde, "A.I. Is Not as Advanced as You Might Think," *Medium*, 10 June 2019. https://zora.medium.com/a-i-is-not-as-advanced-as-you-might-think-97657e9eecdc.

17. Jennifer Elias, "Google Contractor Reportedly

Tricked Homeless People Into Face Scans," CNBC, 2 October 2019. https://www.cnbc.com/2019/10/03/google-contractor-reportedly-tricked-homeless-people-into-face-scans.html.

18. Simone Browne, *Dark Matters* (Durham, NC: Duke University Press, 2015). https://www.dukeupress.edu/dark-matters.

19. Steve Lohr, "Facial Recognition Is Accurate, if You're a White Guy," *New York Times*, 9 February 2019. https://www.nytimes.com/2018/02/09/technology/facial-recognition-race-artificial-intelligence.html.

20. Nick Wingfield, "Amazon Pushes Facial Recognition to Police. Critics See Surveillance Risk," *New York Times*, 22 May 2018. https://www.nytimes.com/2018/05/22/technology/amazon-facial-recognition.html.

21. Jacob Snow, "Amazon's Face Recognition Falsely Matched 28 Members of Congress With Mugshots," *ACLU*, 26 July 2018. https://www.aclu.org/blog/privacy-technology/surveillance-technologies/amazons-face-recognition-falsely-matched-28.

22. Snow, "Amazon's Face Recognition Falsely Matched 28 Members of Congress With Mugshots"

23. Ibid.

24. Ibid.

25. "Facial Recognition Market 2019 Global Size, Share, Growth, Competitor Strategy and Trends by Forecast to 2022," *Market Watch*, 12 April 2019. https://www.marketwatch.com/press-release/facial-recognition-market-2019-global-size-share-growth-competitor-strategy-and-trends-by-forecast-to-2022-2019-04-12

26. "Design Justice Network Principles," *Design Justice Network*, last updated Summer 2018. https://designjustice.org/read-the-principles

27. Sasha Costanza-Chock, *Design Justice: Community-Led Practices to Build the Worlds We Need* (Cambridge, MA: MIT Press, 2020). https://mitpress.mit.edu/books/design-justice.

28. Costanza-Chock, *Design Justice*

29. "Collective Wisdom: Co-Creating Media within Communities, across Disciplines and with Algorithms," Co-Creation Studio Website, n.d. https://cocreationstudio.mit.edu/

30. Katerina Cizek et al., "Collective Wisdom: Co-Creating Media Within Communities, Across Disciplines and With Algorithms," Works in Progress, n.d. https://wip.mitpress.mit.edu/collectivewisdom.

31. Katerina Cizek et al., "Part 1: 'We Are Here': Starting Points In Co-Creation," Work in Progress, 14 May 2019. https://wip.mitpress.mit.edu/pub/collective-wisdom-part-1.

32. Alfred Ng, "Tenants Call for Better Laws After Stopping Facial Recognition from Moving in," *CNET*, 22 November 2019. https://www.cnet.com/news/tenants-call-for-better-laws-after-stopping-facial-recognition-from-moving-in/.

33. Elizabeth Kim, "Congress to Consider Bill Banning Facial Recognition from Public Housing," *Gothamist*, 29 July 2019. https://gothamist.com/news/congress-to-consider-bill-banning-facial-recognition-from-public-housing; H.R.4008-No Biometric Barriers to Housing Act of 2019 116th Congress (2019-2020). https://www.congress.gov/bill/116th-congress/house-bill/4008?r=9&s=1.

34. Margot E. Kaminski and Andrew D. Selbst, "The Legislation That Targets the Racist Impacts of Tech," *New York Times*, 7 May 2019. https://www.nytimes.com/2019/05/07/opinion/tech-racism-algorithms.html.

35. Mutale Nkonde, "A Case for Critical Public Interest Technologists," *Data Society*, 19 April 2019. https://points.datasociety.net/a-case-for-critical-public-interest-technologists-111d7ea3d384.

36. Zolan Kanno-Youngs, "New York Police to Expand ShotSpotter Technology," *Wall Street Journal*, 3 August 2017. https://www.wsj.com/articles/new-york-police-to-expand-shotspotter-technology-1501798302

37. Hannah Gold, "Shotspotter: Gunshot Detection System Raises Privacy Concerns on Campuses," *The Guardian*, 17 July 2015. https://www.theguardian.com/law/2015/jul/17/shotspotter-gunshot-detection-schools-campuses-privacy.

38. Ibid.