Biometric capture: disrupting the digital codification of black migrants in the UK

Article (Accepted Version)

BIOMETRIC CAPTURE: DISRUPTING THE DIGITAL CODIFICATION OF BLACK MIGRANTS IN THE UK

Abstract

The current system of the surveillance of migrants relies on biometric capture. To be captured is to be codified into machine-readable representations. This paper merges technological codifications with political discourse to explore the disproportionate capturing of black migrants in the UK. Using the historical treatment of Nigerian migrants in the UK as an illustration, this paper interrogates how contemporary technologies are used to codify and confine black migrants. This paper explores works from digital artists — Keith Piper and Joy Buolamwini — to address this codification of blackness using biometric technology. It calls for new technological cultures of coding that centre the disruption of violent systems of capture. Failure is defined as this disruption of hegemonic systems of codification and capture that aim to subjugate black communities. This paper stresses that it is only when technologies of capture fail that black and migrant communities can truly experience digital freedom.

Keywords:

biometrics, surveillance, migration, capture, race

As though I was living in a farcical dystopic film about bureaucracy created by the Nollywood filmmaker Kunle Afolayan, I walk into the high-ceiling lobby of the Nigerian High Commission in London in the hopes of renewing my passport. I walk up a crowded hallway, into a room packed with people. I present my documents at several checkpoints, after which my ticket number is called to move upstairs to the waiting room. Upstairs, along a five-foot-wide corridor stood two rooms next to each other—the biometric waiting room and the biometric capture room. I move into the former, where passport applicants watch the news from the Nigerian Television Authority. The people in this room occupy themselves while waiting for their biological data to be captured and stored in their biometric passports. As one of the largest gatherings of black people I have ever seen in the setting of data capture, this moment underscores the legacy of colonial power as an imposition of systems of capture. Illustrating the legacy of colonial imposition is the British colonial government's role in producing the first instance of the Nigerian passport in 1948 (Ogbu 2015). The colonial administration called this document the British West African passport, signifying that Nigerians were British citizens located in West Africa. The British West African passport required the capturing of Nigerians data—name, gender, age and so on. This paper will expand on the colonial imposition and capture, linking it to the present-day process of biometric capture. Particularly, it focuses on the British colonial capture of Nigerians and the implications of this legacy in the codification and biometric capture of Nigerians in the UK.

As Nigerians make up the largest number of Black Africans who then make up the major pool of black people in the UK (Government Digital Services 2018), the treatment of Nigerians becomes symbolic of the treatment of black populations in the UK. Therefore, the digital capture of Nigerians is symbolic of the digital capture of black communities in the UK. From the categorization of Nigerians as illegitimate migrants with the UK's 1960s immigration laws to their numbers as one of the most prominent populations of black

migrants, Nigerian migrants have a complicated history with the UK. The complicated history merges with contemporary issues especially when taking in the global trope of the Nigerian internet fraud prevalent since the late 1990s (Kperogi and Duhé 2008). Such issues coalesce to tag Nigerians as criminals in the UK. A cursory search for the word 'Nigerian migrant' in British tabloid newspapers such as The Daily Mail will lead to stories of sham marriages (Williams 2016; Andrews 2019), credit card scams (Robertson 2018), and benefits fraud (Duell 2016). Thus, the Nigerian fraudster merges with British tensions about immigration to criminalize the Nigerian diaspora in the UK.

Solutions to the problem of the 'Nigerian migrant' take the form of biometric identification. The Nigerian government attempts to deal with the problem of falsifying documents and identity fraud through enforcing securitized e-passports and biometric identification campaigns (Jackson 2015). Introduced in July 2007, the current version of the Nigerian passport is called the ECOWAS (Economic Community of West African States) Harmonized Electronic Smart Passport. ECOWAS is a regional economic union of 15 West African states[1] that seek to encourage economic prosperity across the member states after their independence from colonial rule (Adepoju, Boulton, and Levin 2010). Established in Lagos, Nigeria on May 28, 1975, one of the longstanding goals of ECOWAS is freedom of movement across the region. ECOWAS encapsulated this goal in the 1979 Protocol Relating to Free Movement of Persons, Residence and Establishment (Adepoju et al. 2010). The project to create a single harmonized passport to aide intra-regional movement, was initialized in 2000. As Omeje (2017) reports, it was the persuasion of the seating Nigerian President, Olusegun Obasanjo—not necessarily pressure from ECOWAS's international

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[1] Benin, Burkina Faso, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone, and Togo.

sponsors such as the European Union—that lead to the adoption of securitized document as the official ECOWAS passport in 2007. Bolstering Nigeria's national interest in managing identity within and across its borders, the document incorporates captured facial and fingerprint data stored in a chip, to accept the "body as a password" (Lyon 2009: 113). It follows the global standard of securitization through biometrics, as unique identity markers such as iris patterns and facial landmarks are difficult to falsify. Used as the standard for identity verification at most borders, biometrics are "represented as infallible and unchallengeable verifiers of the truth about a person" (Amoore 2006: 343). Statistics such as the one in 64 billion chance of two fingerprints matching (Cole 2002) are the basis on which governments and private firms argue for the reliability and objectivity of biometric identification.

Placed in networked databases shared amongst international organizations, airports and countries, biometric data links the body to a digital identity, ensuring that no matter where they are located migrants are always bound in digital captivity to the border. The biometric or digital capture of migrants makes freedom from the border impossible. It is the impossibility of escape that differentiates biometric capture from earlier methods of identification. Furthermore, the impossibility of escape asserts colonial dominance over Nigerian migrant's digital life, as the legacies of capture are further embedded into their everyday activities as they confirm their identities with biometric documents at banks, schools, and hospitals. Therefore, in this article, I argue for freedom from the colonial imposition of capture. I call for resistance and the creation of possibilities of escape from digital captivity. I center the artistic responses to capturing of black populations as such examples of resistance by focusing on two works from black digital practitioners. The works in focus are *Tagging the Other* by Keith Piper (1992) and *The Coded Gaze: Unmasking Algorithmic Bias* by Joy Buolamwini (2016).

This paper has a few limitations. By focusing on art practices, this paper forgoes the opportunity to conduct a qualitative or quantitative study of the everyday migration tactics of black migrants in order to empirically understand the policing of the UK or EU border in relation to race. It is beyond the scope of this paper to conduct an empirical study of the migration patterns of black migrants or Nigerians in the UK. Also, the choice of Piper's and Buolamwini's artworks makes my arguments on race and biometrics easily falsifiable. However, as I iterate in the following sections, this paper is not concerned with the counterargument of racial neutrality in biometric technology or migration as these arguments are commonplace (Amoore 2006; Magnet 2011). In focusing on art practices that support my arguments of racial bias in biometrics I aim to add to the growing body of scholars, such as Browne (2015) and Magnet (2011), that aim to disrupt the commonplace understanding of the objectivity of biometric technology. Furthermore, this paper is grounded in acts of cultural production, as Browne (2015: p.8) notes that "with certain acts of cultural production we can find performances of freedom and suggestions of alternative ways of living under a routinized surveillance." This paper is chiefly interested in the performances of freedom and alternatives to regimes of surveillance that can be created only through art practice. Another limitation of this paper is in the cyclical argument of biometrics and colonization. This cyclical argument is unavoidable as it represents the cyclical nature of the colonial power of biometrics. On the one hand, early biometric technologies were developed in contexts of colonial administration. Characterizing the development of biometrics in colonial contexts, is the 1858 collection of the palm print of a road contractor, Rajyadhar Kōnāi, by the British magistrate, William Herschel in colonial India (Herschel 1916). The use of palm prints for identification is one of the earliest developments of biometrics. On the other hand, given the impositions that must be made for modern applications of biometrics, scholars—most notably, Agre (1995)—see biometrics as a metaphor for colonization. Thus, a cyclical pattern

emerges where biometric capture resembles colonization and colonial regimes impose biometric capture. As I have stated, this cyclical argument, is unavoidable when addressing modern biometrics and colonial power.

The first section of this article expands on the analysis of digital biometric capture that addresses its colonial nature. I focus on Agre's (1994) notion of capture as it stresses the impositions—the rearrangement of life—that must be made for computational capture. Agre (1995) calls such impositions a metaphor for colonization. However, I argue that when looking at the capture of Nigerian migrants, such impositions move from mere metaphor to tangible acts of colonialization. I extend my argument by examining the history of Nigerian migrants in the UK. This history illustrates the tangible colonial impositions made to capture black and Nigerian migrants in the UK. Central to these impositions is the codification—the writing into law—of the black or Nigerian migrant as criminal others. In the second and third section, I delve deeper into the computational codification of blackness using the artistic works of Keith Piper and Joy Buolamwini to illustrate and challenge the process of tagging blackness. Building on these works, I focus on two ways contemporary biometric technologies codify blackness. Firstly, I explore the tagging of blackness through the deployment of biometric technologies with the explicit aim of policing criminalized black communities. Secondly, I interrogate the ways these technologies tag blackness with failure. I develop on Browne's (2010) digital epidermalization to address the tagging of blackness in the moments when biometric technologies fail to properly register or recognize racialized others. Instead of arguing that biometric technologies should be mended to properly identify or police black people, I argue for the failure of these machines. In this sense, I call back to the colonial legacy of biometric capture. I emphasise that when biometrics work as originally intended, they are the tools of surveillance that restrict black migrant mobility and reinforce the colonial codification of black people as criminals. In addition, as biometrics are

increasingly used to enforce hostile immigration policies and captivate migrants to the border, I do not suggest ways this system can work. Instead, I explore failure as a possibility of freedom from the hostile biometric environment.

I embrace failure as resistance to capture. The fourth section of the chapter develops on the notion of failure borrowing from Glissant (1997) and Halberstam (2011) to argue for a new system of codification—a new defiant language—that evades digital capture and aids black migrant freedom. I call such languages 'computational creole,' as they appropriate machinic errors into modes of resistance. They become ways through which the legacy of racism and colonization that have been written into biometric capture can be challenged. It is through the new language of computational creole that I position freedom for black migrants—thus disrupting the legacy of the codification and capture of black migrants in the UK.

Colonial Capture: Contextualizing the Surveillance of Black Migrants in the UK

Data capture is the new paradigm for privacy in the era of biometric identification. I use the word privacy instead of security, as van der Ploeg (2003) notes that government agencies position biometrics as a humane contrast to earlier processes of documentation. Such methods stored information in verbose human-readable form that could be assessed by unauthorised parties to identify a person. Complemented by cryptographic processes that obscure and anonymize data, biometrics are constructed as a definitive tool for enhancing the privacy of migrants in as much as it is understood as the new standard of security at the border. The use of the word 'privacy' also refers to Agre's (1994) cultural model of privacy in which he compares surveillance to capture. This model differentiates common understandings of privacy from the new computerized models. For Agre, people commonly think of privacy in terms of surveillance. In this mode, private life is invaded by a powerful

watcher. Surveillance is connected to visual metaphors communicated by popular statements such as 'Big Brother is watching.' It more invasive and obnoxious than the new model of privacy brought in computational processes. Such modes linguistically parse human activities from data. They rely on computational capture and interpretation of said activities.

While Agre's differentiation of the visuality of surveillance from the linguistic nature of capture is valid, this paper defines surveillance as "the focused, systematic and routine attention to personal details for purposes of influence, management, protection or direction" (Lyon 2007: 14). This definition encompasses all forms of surveillance—biometric surveillance, DNA testing, GPS tracking, wiretapping, dataveillance, and so on—which in turn includes computational capture. With that being said, the computational model of privacy or data capture, highlights the contemporary practices of surveillance. No longer do subjects have to be watched, instead their behaviours and attributes are parsed in a linguistic system that translates every portion of their being to machine-readable artefacts. The collection of these artefacts relies on 'grammars' that consist of a thorough deconstruction of an activity or object into its unique features, which are then arranged into a set of rules that a given computer can replicate, interpret or recognize. For instance, facial recognition consists of the deconstruction of a given face into the unique features that mark its structure. These features are then stored as a template and compared to a presented face to link the data to its originator (Gates 2011). Different systems resort to various methods to read and recognize the face for biometric identification. However, the grammar stays the same—present a face, document its unique landmarks, store the landmarks as a template and match a presented face to the stored template.

Agre (1994) describes capture as a metaphor for colonization, maintaining that computerized capture requires a "reorganization of communities' systems of meaning so that existing concepts are given technical definitions and thus subordinated to a technological

order of knowledge and power" (Agre 1995: 180). While Agre's conceptualization of capture as a metaphor for colonization is vital, it is important to note the tangible acts of colonial racism embedded in the contemporary applications of digital capture. Colonization, as the scholar Cesaire (2000: 42) states, is a system of "domination and submission which turn[s] the coloniz[er] into a class-room monitor, an army sergeant, a prison guard, a slave driver, and the indigenous man into an instrument of production." As a system of domination and submission, colonization always involves the imposition of the codes of the monitor, guard, and so on into indigenous cultures. This imposition is a form of capture as conceptualized by Deleuze and Guattari (1989). For the theorists, capture is the act of reducing indigenous cultures and property into a system of codes understood by the ruler. Indigenous land is codified as rent; activity as labour and profit; and nature as raw material. Everything that meets the gaze of the imperial state can be codified and, therefore, captured.

Scott (1998) outlines in the book *Seeing Like a State* several processes of colonial capture, ranging from the creation of permanent last names for indigenous people to the standardization of farming methods. Taking the illustrations Scott gives, to be captured in colonial terms is have one's identity dictated as some state-sanctioned code and represented by a number that is issued in identity cards, birth certificates, driver's licenses, and passports. In that vein, the British West African passport was a method of capturing Nigerians under imperial dominion. Before the capturing into identification document came the colonial assignment of permanent surnames to the indigenous people. As Deleuze and Guattari (1989: 448) explicate, "there is lawful violence wherever violence contributes to the creation of that which it is used against, [… or] wherever capture contributes to the creation of that which it captures." Further expressing exposing this violence, the scholars highlight the technological nature of capture, calling it a system of "machinic enslavement" (Deleuze and Guattari 1989: 460). The colonizer invents technologies that enforces its system of codes and entraps people

to the said system. These aspects of colonial capture are evident when looking into the history of the Nigerian passport.

Under the British Nationality Act of 1948, citizens of the Commonwealth could freely travel to and live in the UK and its colonies using their British colonial passports (Solomos 1988). Until Nigeria gained independence in 1960, the British West African passport was the primary identification paper needed for a Nigerian to travel to the UK. Nigerians migrating into the UK would join the 1950s post-war Black Caribbean migrants called the Windrush generation, changing the cultural makeup of the UK (Solomos 1988). The change in racial and cultural makeup incited anxieties. Thus, the problems of housing, employment, and crime were laid on the shoulders of black migrants.

Responding to these problems, the British parliament placed several restrictions and checks to reduce immigration from its former South Asian and African colonies. These restrictions were stipulated by the Commonwealth Immigrants Act of 1962 and the Immigration Act of 1971 (Solomos 1988). The laws withdrew the right to freely migrate to the UK from former African and South Asian colonies. However, these rights were retained for former white-majority colonies and Commonwealth nations such as Canada, Australia, and New Zealand. As Solomos (1988) states, these policies were thinly veiled exertions of white British nationalism. In particular, the restrictions enacted were strict visa requirements placed on migrants from India, Pakistan, Bangladesh, Ghana, and Nigeria in 1986. As seen in the transcript of Parliamentary debates, nationals from these former British colonies would undergo more rigorous checks entering the UK (House of Commons Debate 21st October 1986). As part of the increased scrutinization, they would be required to secure a UK visa before travelling or face refusal at the border. Arguing for the visa requirements, the 1986 Minister of Home Affairs, Malcolm Sinclair (HC Deb. 21st October 1986) stated citizens from India, Pakistan, Bangladesh, Ghana, and Nigeria made up 49 percent of entry refusals in

1985 and 53 percent in 1986. While the minister noted the generally increasing number of migrations into the UK and the resulting pressures the upsurge placed on border staff, he singled out these countries while stressing the protection of 'bona fide' visitors. Closely reading Sinclair's statement, migrants from India, Pakistan, Bangladesh, Ghana, and Nigeria were to be written in legislature as illegitimate visitors with the proposed visa restrictions.

After the successful implementation of the visa requirements argued by Minister Sinclair and his party in 1986, citizens of India, Pakistan, Bangladesh, Ghana, and Nigeria faced a further increased rate of refusal to enter the UK (Great Britain Home Office 1987). These visa restrictions on African and South Asian migrants show some of the first instances of the codification of travellers of colour as illegitimate migrants, criminals or security threats. As Dean (1986) reports, the statistics did not match the reason for the increased controls. On the one hand, ministers argued that the visa restrictions were necessary to reduce illegal migration, which they had linked to the five countries. On the other hand, statistics showed that out of the 452,000 migrants from these countries, only 222 fled into hiding as undocumented migrants. In addition, as Lord Eric Lubbock—from the opposition party— highlighted, the statistics the Minister Sinclair stated about the 53 percent rate of refusals of the five countries could be interpreted differently (HC Deb. 21st October 1986). It could have been interpreted as pre-existing higher level of scrutinization of these nationals. It could also have been interpreted as the result of the border agents' disproportionate suspicion of the members of the five countries that resulted in their disproportionate refusal from entry. Furthermore, Dean reports that before the restrictions on the five countries, only communist nations were required to provide visas on entry. Thus, this era began the long history of codification of the black migrant as a criminal.

Surveillance of this 'criminal' at the border occurred through stringent immigration checks and disproportionate scrutiny. Within the UK, these black migrant communities were

monitored by abusing the 'stop and search' powers of the police first written in the Vagrancy

Act of 1824, also known as the 'sus laws' (Hall et al. 1978). The successor to this legislation

is the Police and Criminal Evidence Act of 1984 (PACE). This law was used as the basis for

the disproportionate surveillance of black youth in the UK (Hall et al. 1978). It led to the

antagonism between the police and the black community, which will be addressed later in the

next section. PACE is currently used as a validation for the stop and search of black people in

the UK. As the Equality and Human Rights Commission (2010: 10) state, "if you are black,

you are at least six times as likely to be stopped and searched by the police in England and

Wales as a white person." In 2018 this number increased to 9.5 (Government Digital Services

2019).

　　　　While other western countries such as the US (New York Civil Liberties Union

2012) and Canada (Wortley and Owusu-Bempah 2011) show the same pattern of a higher

rate of stop and search for black people, the UK is unique due to the colonial legacy of the

codification and resultant surveillance of black migrants. Although stop and search has a

longer legacy than biometrics, the surveillance of black populations is increasingly a question

of digital capture. Scholars such as van der Ploeg (2003) have questioned the violation of

bodily integrity in biometrics that bears similarity to violation of a stop and search. As the

body does not need to be physically present or consent when its data is digitally scrutinized,

biometric technologies abuse bodily integrity with less resistance than a stop and search. The

ability to inspect a body in its absence harkens back to Cesaire's (2000: 42) definition of

colonization as a system of "domination and submission." The body turned to biometric data

is dominated and appropriated for the purposes of the proprietor of the database. Therefore, if

capture is a linguistic system involving computational grammars that reorganize life, as Agre

(1994) notes, these grammars are informed by colonial impositions of power. These

grammars also involve what Hall (1995: 21) calls a "grammar of race"—codes and symbols

that define race. Such grammars of race, as it pertains to blackness, represent blackness in codes. For instance, as Hall (1995) notes, the grammars of race in film codifies black people as lazy or subservient through their representation as sambos or mammies. The following two sections address the codification and representation of blackness in and through digital capture. To address such codifications, I first discuss the grammar of race within the deployment of surveillance technology. Keith Piper's 1992 work of art, *Surveillance: Tagging the Other* centres this exploration of the codification of blackness using technology. In the subsequent section, I look to Joy Buolamwini's *The Coded Gaze* to examine the codification of blackness through the biometric failure to recognize faces with dark skin tones.

Tagging the Other: On Technology and the Codification of Black Migrants in the UK

"It is a serious problem. There are about a thousand applications being made in a week. How many of those bogus? I don't know. But it is thought that a great majority of them are bogus," says one of the many voices layered into the discordant soundscape in *Tagging the Other*[2] (Piper 1992: no pagination). This four-panel video installation has a soundscape that loops personal accounts, news broadcasts, and political speeches. These play over a cacophony of police sirens and beatboxing, all of which join to create an atmosphere that evokes the social anxieties surrounding migrants of colour in the UK. These anxieties include, on the one hand, the state imperative to capture the "truth" (Amoore 2006, Magnet 2011) of identity, and on the other, the desire of communities under surveillance to live in peace. As though they are in a grand national conversation, voices immediately follow each other. The voices are those of black migrants who give their experiences of racial

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[2] See video excerpts of *Tagging the Other* in the link provided in the bibliography.

discrimination and anti-immigrant sentiment in the UK. A person explains that due to their

race, it would be difficult for the border agent to tell if they were a British citizen from the

Caribbean or a West African migrant worker. Their identity card would be the only proof that

they have the right to reside in the UK. Therefore, the responsibility is on them whether the

border officer refuses them or lets them in. Here, Piper shows the construction of black

citizens in the UK as perpetual diaspora, constantly belonging elsewhere even when they

might have lived their entire lives in Britain. Another migrant underscores this dilemma of

belonging decrying that the mixed messages of assimilation and negation of migrant

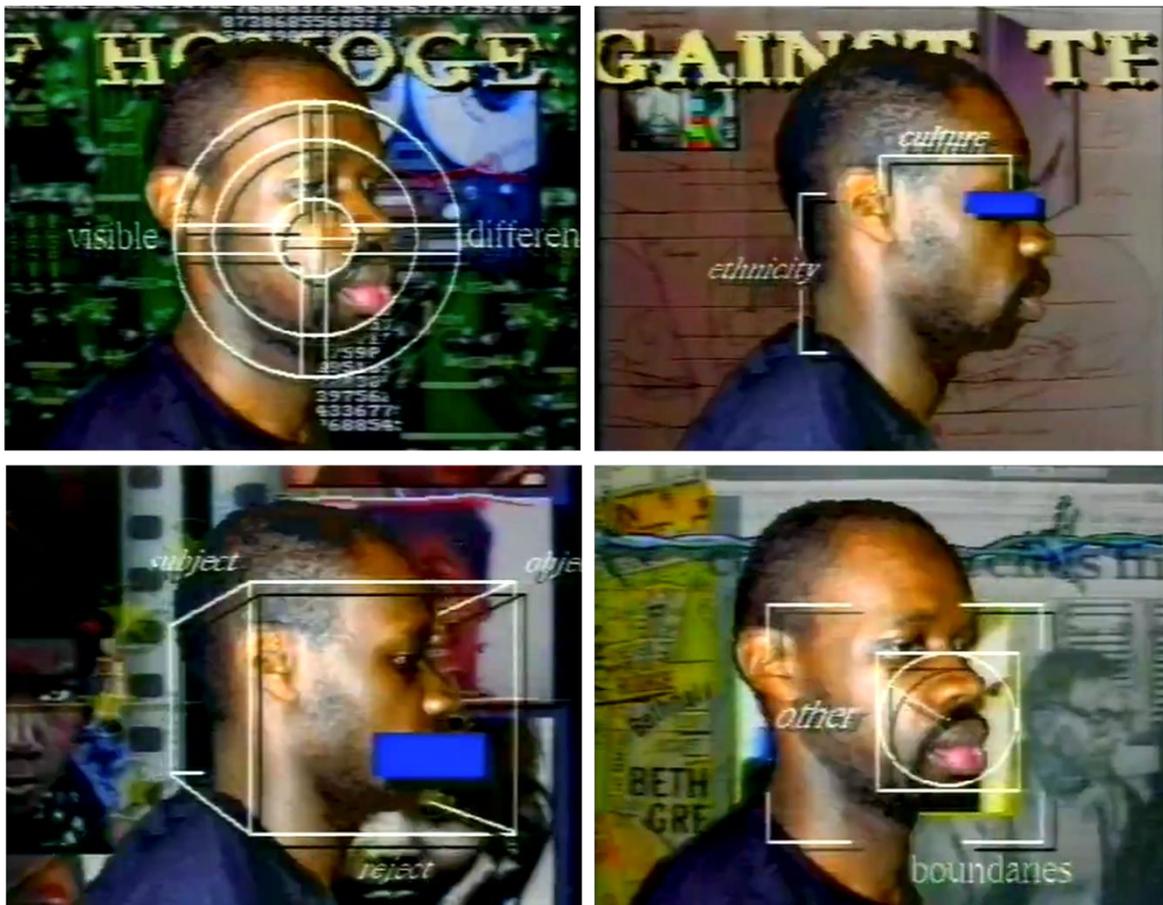identities have left them confused about their relationship to the UK.

Figure 1. Still frames of the four video panels of *Tagging the Other.* Video by Keith Piper
(1992). Courtesy of the artist.

All four video panels (fig. 1) have an animated bust of a black man placed alongside

texts and images. The bust rotates in a manner that simulates a 3-dimensional scan.

Differentiating these four panels, are the objects and texts that track the movement of the man's face. In the first panel, instead of boxes tracking his face, a concentric circle resembling a sniper's target traces his movement. The panel is titled "visible differences." In the second pane, the circle that encloses the man's face changes to an open bracket accompanied by a blue bar that covers his eyes. The title of the x-axis is "culture," and "ethnicity" is on the y-axis. The man's head is outlined by a 3-dimensional box in the third panel. On the two top axes are "subject" and "object." "Reject" rests underneath. The blue bar moves from his eyes to his mouth. In the final panel, the bracket returns, enveloping the man's head. Within this bracket is a rotating locus, and outside of this locus is the text "otherness" and the word "boundaries."

Created in the early 1990s, the digital interface in this work bears similarities to technologies of facial capture (Piper 1992). Boxes and circles that track the face are the common design choice in contemporary facial detection. However, in *Tagging the Other,* the text and boxes of the digital interface become ways of communicating the codification of the scrutinized black person. Connecting this technological language to the national discourses and personal accounts of black communities in the UK, Piper illustrates the connection of social tagging (through the news and politics) to the technological tagging or surveillance of black people in the UK. Piper places this critique of technological surveillance and social tagging in the background text behind the rotating bust in the Subject/Object/Reject panel. The text reads: "FIXING THE BOUNDARIES OF A NEW EUROPE... TAGGING THE OTHER… PERFECTING NEW TECHNOLOGIES OF SURVEILLANCE… POLICING, INTERNATIONAL COLONIES OF DIFFERENCE… REINFORCING THE FORTRESS."

Therefore, sacrificed within the process of the initiation of a unified European market, are those othered in the dialogue surrounding this national transformation. Akin to the 1960s increases in migration control for black migrants (Solomos 1988), the British

tensions about the movement of the African diaspora at this defining moment is quelled by the increased capturing of these groups of people. This sacrifice culminates in technological development and the reinforcement of national borders. As with the events of the 1970s and 1980s, whenever British identity seems most tenuous, race is often brought into the centre of the debate. Mercer quotes Stuart Hall in the anthology of Piper's work "Blacks become the bearer, the signifiers of crisis of British society [… Race] is the framework through which the crisis is experienced. It is the means by which the crisis is to be resolved— "send them away"" (cited in Mercer 1997: 41). Within the current era of digital surveillance, the black community is the signifier of crisis in British society. Governmental organizations battle to control this community through technological means, thereby "perfecting new modes of technological surveillance" (Piper 1992: no pagination). Deployment and experimentations of surveillance technology in these communities highlight the perfection of computational capture in the process of tagging the black other.

The 2016 Notting Hill Carnival demonstrates the ways technologies continue colonial legacies of capture. In 2016, the Metropolitan Police Service (MPS) tested out real-time facial recognition in the Notting Hill Carnival (Randhawa and Crerar 2016). This festival is thrown in the celebration of the African and Caribbean community in the UK. MPS took this gathering as an opportunity to test biometric surveillance, complementing it with 'super-recognizer' officers who are trained to spot wanted criminals. As Randhawa and Crerar (2016) report, the database they used to train the facial recognition software consisted of images of people who had been banned from the carnival and those who had arrest warrants out for them. After this first attempt, the MPS returned in 2017 with a scaled-up arrangement. They used a wider database containing twenty million facial images from people who had been in police custody (Wiles 2017). As Martin (2017) reports, MPS' facial recognition program matched 35 people to the wrong facial template. In one case, the match

led to an arrest of an innocent person. The 2016 and 2017 deployment of 'super-recognizers'

and facial recognition to police and monitor black migrants did not appear out of nowhere.

The MPS' contemporary surveillance experiment calls back to the over 40-year-old tension

between the police and the black community in the UK. This tension is also encapsulated in

the 1976 Notting Hill Riot.

As Gilroy (1987: 93) writes, the 1976 Notting Hill Carnival riot was "a watershed in

the history of conflict between blacks and the police and in the growth of the authoritarian

forms of state planning and intervention." This moment marked the beginnings of the tagging

of black youths as criminals. It was within this same grammar of race via colonial conquest

and Western imperialism that the black immigrant was tagged as a high-security threat at the

UK border. The relationship between the independence of the former British colonies, the

post-war immigration from Commonwealth nations, and the rise in British racism in the

1960s and 1970s cannot be overstated. As stated earlier, as of 2018, a black person is 9.5

times more likely to be stopped and searched by the police than a white person in the UK

(Government Digital Services 2019). This disproportionate suspicion and monitoring of black

people takes its roots in the historic moments of colonization, migration, and British racism.

They highlight that blackness was surveilled both at the border and within the residences of

the UK. Therefore, the contemporary capture of black populations within the UK cannot and

should not be separated from colonial practices tagging and codification of indigenous

identities.

Best characterizing this period of the discursive and textual tagging of blackness is

the British nationalist, Enoch Powell's, labelling of mugging as a black crime. As Hall et al.

(1978) note, mugging only came into the British vocabulary within the early 1970s. Piper

indicates this in the fourth panel of *Tagging the Other* — "naming the problem" (Piper 1992).

Naming problems here is also comparable to the 1980s classification of black migrants as

high-risk or illegal. This practice of racially naming several aspects of criminality ultimately

led to state violence, wherein 1500 police officers were deployed into the 1976 carnival. MPS

reports, according to Gilroy (1987), stated that the cause of this riot was an act of black

solidarity in which the crowd came to the defence of some black 'criminals' being arrested.

Almost 40 years later, this tradition of the surveillance and violent policing continues as the

police continuously escalate their efforts to control crime within the Notting Hill Carnival.

Most telling of this tradition is the criticized row of arrests—656 in total—in the weeks

leading up to the 2017 Notting Hill Carnival (Grierson and Gayle 2017). Facial recognition as

a form of the MPS' colonial state capture, applies this historical grammar of race in the UK.

The deployment of this technology in Notting Hill signifies the continued efforts in the

criminalization of African and Caribbean communities now written into technologies of

surveillance.

As introduced earlier, the ECOWAS biometric passport is one of the identification

technologies used to codify and police the criminal Nigerian migrant. Such documents

connect bodies to digital identities stored on several networked databases. Amoore (2006)

terms the network of biometric databases the 'biometric border'—a system of digitized

bodies and national frontiers that ensure that migrants are always linked to the border. Hence,

the impossibility of escape is what separates the biometric border from earlier technologies of

capture used in border policing. While these earlier systems relied on identification through

photographs, signatures, and physical fingerprints that would be interpreted by humans, the

networked biometric border relies on the power of computation. This is the power to capture

and recognize several biometric traits in a fraction of the time it would take a human. It is the

power, as stated earlier, to inspect a body even when it is not present. Therefore, the

biometric border creates an inescapable fortress of digital captivity or "machinic

enslavement" (Deleuze and Guattari 1989: 460). When used in strict immigration regimes, biometric borders become violent enforcers of national boundaries.

An example of the violent regime of biometric border surveillance is the 'hostile environment' towards illegal immigration championed by the former UK Home Secretary, Theresa May (Kirkup and Winnet 2012). In the UK, biometrics enforce the general hostility towards migration with no consideration for legality. The government deputizes healthcare staff, school administrators, landlords, and bank clerks as border agents. These private citizens would be required to confirm and report the immigration status of those they encounter, denying services where necessary. Biometric documents such as e-passports, visas, and residence permit cards are the primary tools for enforcing these checks. Through the hostile biometric environment in the UK, the border is virtualized and connected to the bodies of migrants. Consequently, these migrants are constantly surveilled and confined in digital captivity.

It was due to these strict rules on migration and documentation that several people of African and Caribbean descent who arrived in the post-war era using their colonial and Commonwealth passports were denied access to employment, healthcare, benefits, and entry into the UK (Gentleman 2018). These people of Caribbean descent are called the Windrush generation after the vessel, the *Empire Windrush* that famously carried Jamaicans into UK in 1948 (Fryer 2010). The Windrush generation were invited and recruited from their home countries to lessen the labour scarcity the UK faced after WWII. From the 1950s to 1970s, before the passing of the anti-immigration laws in the UK, people from the Caribbean travelled to the UK to take on jobs as nurses, railway and public transport workers. They did not only help rebuild the country after the war, but due to their position as colonial subjects, they were British citizens. As Fryer (2010) notes they considered themselves English. The Windrush generation had British passports. They did not require any further documentation

to settle in the UK. However, within the current hostile biometric environment, this generation now required British passports or migrant resident permits to access essential things such as housing, healthcare and disability benefits. In addition, numerous members of the Windrush generation and their families faced deportations and refusals from the UK Border. The issue gained prominence with increased media coverage in 2018, as stories of the elderly generation being denied healthcare and access to benefits met the public eye. It rose to the level of national scandal ensuing parliamentary debates.

The 'Windrush Scandal,' as the event was called, stresses the criticality of biometric documentation for migrants as it is a necessity for their survival. Such imperatives of documentation—biometric or otherwise—must therefore be problematized. Human survival should not depend on documents. Nonetheless, the current immigration system functions in this way. The migration system as it stands in the UK continues the project of colonial surveillance outlined above. Instead of redesigning the system, it uses biometric technology to enforce the colonial codification of black migrants from the earliest days of contemporary British migration. Instead of revolutionizing the process of immigration, these technologies exclude and confine black migrants. Therefore, this article does not attempt to justify or support this system. It does not propose humane forms of biometric surveillance or documentation as it understands that these systems as the violent apparatus of colonial capture. Instead, I focus on failure, considering the potential for freedom from surveillance within the moments when these technologies malfunction.

Understanding Biometric Failure: The Codification of Race in Digital Technology

Even when they fail, they succeed Magnet (2011: 3) states on biometric technologies. Martin (2017) reports this sentiment echoed in the MPS' reaction to the false matches and erroneous arrest in the 2017 facial recognition pilot. While activist groups and

people of colour declared the technology faulty at best—and racist at worst—MPS stated that it was a success (Martin 2017). The impossibility of biometric failure, according to Magnet, thus lies in the discourses surrounding it. Within the context of the colonial police state, biometrics can only fail when they negate the purpose of domination and control—when they hinder surveillance. Therefore, the definition of biometric failure within this paper is the disruption of colonial capture. This section looks at the computational codification of blackness to address and expand on biometric failure.

In the technical sense, failure in biometric systems has separate categories. These categories are false match, false non-match, and failure to enrol (Nanavati, Thieme, and Nanavati, 2002). False matches occur when the system accepts data different from biometric template given at the initial moment of data capture. An example of this is the incorrect acceptance of the user's identical twin or doppelgänger in a facial recognition system. False non-matches are the opposite of the false match. They occur when the correct information is rejected. Failure to enrol (FTE) is the inability of the biometric system to capture the data of a given subject. FTE can occur for several reasons. It can be due to environmental issues such as a poorly lit face, faults in the hardware or software, or demographic failure. "Demographic failures" (Magnet, 2011, p.5) are of particular interest in this paper as these are the cases in which biometrics fail due to age, gender, race, or ability. Magnet (2011), typifies several instances of such failures in the issues Asian women experience with fingerprint scanners to those people with dark skin-tones experience with facial recognition technology. The MIT researcher and activist, Joy Buolamwini (2016) documents her experience of the latter form of demographic failure in *The Coded Gaze.*

Buolamwini created *The Coded Gaze* in response to her experience making her previous project called *The Aspire Mirror*—a device that uses facial recognition and image overlays to enable "you to look at yourself and see a reflection on your face based on what

inspires you or what you hope to empathize with" (Buolamwini 2015). When testing the mirror, she discovered that the software would not recognize her face. She resorted to wearing a generic white mask to test-run the project. In *The Coded Gaze* (Buolamwini 2016), she questions the bias facial recognition algorithms have against dark-skinned people. Here, she demands algorithmic justice through the representation of diversity in the production of these technologies. *The Coded Gaze* illustrates the representational nature of digital capture, as Buolamwini pinpoints the lack of black and brown faces in the dataset of facial references. The researcher calls for a remedy of this problem, arguing for the inclusion of a diverse set of coders into the creation of these algorithms. The call for diversity and the representation of black coders is where Piper's (1992) criticism of the grammar of race written into technology connects with Buolamwini's work. It is also from this juncture that I develop on the linguistic potential of failure to create digital codes that aid black migrant freedom from digital captivity.

In the *Tagging the Other* panel titled "visible differences," Piper (1992) places the text "the binary code of ethnicity." By binary, the artist is referring to the dualistic categorization of cultural difference. Synchronously, binary code refers to machine code or the basic language of all digital systems (Plant 1997). In a sense, ethnicity and difference are placed here as a basic digital language. As the binary digits of ones and zeros represent the social dichotomies of blacks and white, male and female, legal and illegal, the structural language of computation comes to resemble that of racial ordering. Elsewhere, Piper (2015) reveals in a work-in-progress, a movement beyond the digital dichotomy of race and its implications for computational systems. 'Cyberebonics,' Piper terms certain human-readable languages that aid communication between human agents and the machine. Cyber, here is akin to the digital and Ebonics are languages spoken by black people in the US to communicate with other black people. As Piper underscores, Ebonics is encrypted code only

interpretable by black people. Piper illustrates this encrypted language by playing an excerpt

from Gil Scott-Heron's (1978) 'The Ghetto Code (Dot Dot Dit Dit Dot Dot Dash),' where the

poet speaks in jumbled words used by the black inner-city communities to evade CIA and

FBI telephone surveillance. In this sense, Ebonics is encrypted verbal code. Cyberebonics is

therefore the rendition of Ebonics to machine code with the aims of human-computer

communication. Adobe Director's (formerly Macromedia Director) Lingo is an example of

Cyberebonics for Piper. A scripting language created by the Hackney-born, Brooklyn-raised

inventor of Jamaican descent, John Henry Thompson, Lingo was the primary language artists

used to make interactive content on CD-ROM. Artists would write Lingo script in the media

authoring software Director to manipulate, videos, sounds and animations. Lingo was

verbose in that it had similarities with spoken English. For instance, to move to a video frame

in Lingo an artist would write:

```
go to frame 10
```

Alternatively, in JavaScript, the scripting language used to manipulate web pages, this line of

code would be less similar to spoken words and written in succinct words. Given the

preliminary declarations are made to display a video on the webpage have been made, all the

programmer needs to write to manipulate the video frame in JavaScript is:

```
myVideo.currentTime = 10;
```

In this sense, Lingo fulfils the aims of Piper's Cyberebonics as it eases of human-computer

communication.

In addition, Lingo, as Piper (2015) notes, shares similarities with languages of the

black diaspora such as Antillean Creole, African American Ebonics, Caribbean Patois or

West African Pidgin. The similarity shared with these languages is in the forgoing of strict

grammatical structures. Lingo eschews the classification of variables into specific data types

(i.e. integers, strings, Booleans, and so on). Thus, any given variable could take on any data

type as a string, integer, symbol or Boolean. As in the shifting "series of forgettings" though

which Creole language "renews itself" (Glissant 1997: 69), Lingo has a loose grammar in

which any variable can be converted to any given property or object. This characteristic of

the scripting language makes "Lingo's data typing […] loose to the point of being obscene"

(Epstein 1998: 153). The obscenity of Lingo's loose type is a metaphor for a movement

beyond the dichotomy of binary code and strict codifications that support the colonial

grammars of race.

Cyberebonics carries more significance when brought into the context of biometrics.

For Browne (2015), digital biometric technologies, with their descent from branding, execute

the binary code of ethnicity through "digital epidermalization"—a computational act of

racialization. Browne (2010: 135) defines digital epidermalization as:

> "the exercise of power cast by the disembodied gaze of certain surveillance
>
> technologies (for example, identity card and e-passport verification machines) that
>
> can be employed to do the work of alienating the subject by producing a 'truth' about
>
> the body and one's identity (or identities) despite the subject's claims."

Browne derives the term epidermalization, from Fanon (2008) who describes the embodied

experience of racialization with an event that transpired when he was spotted by a child who

screamed at him, "Look, a Negro!" For Fanon, this moment marked a shift in his identity to

the "racial epidermal schema," thus reducing him to the colour of his skin (Fanon 2008: 84).

Epidermalization or the experience of being reduced to the racial epidermal schema is a

system of tagging the other that assigns a person to a given race.

Digital epidermalization is, therefore, a computational procedure that signals "Look,

a Negro!" In the moment of technological codification, race is created and assigned. A

moment such as the biometric failure to register dark-skinned people, as exemplified in *The

Coded Gaze*, demonstrates the computational assignment of race. When biometric technology

fails due to the tone of the user's skin, it yells, "Look, a Negro!" It thus tags otherness to the

biometric subject. Digital epidermalization, therefore, relies on colonial codes of racial

exclusion written into the technological process of capture. Expanding on cyberebonics, I call

for new languages that appropriate biometric failure and disrupt the digital epidermalization

of black migrants. In this paper, these new languages are called 'computational creole,'

connecting the indigenous acts of resistance against colonial linguistic systems to the

resistance against oppressive digital systems.

Figure 2. A screen-grabbed frame from Buolamwini's YouTube video *The Coded Gaze*, showing her in a white mask. Video by Joy Buolamwini (2016).

Computational Creole: The New Codes of Digital Resistance

The symbolism in *The Coded Gaze* (Buolamwini 2016) is what makes it subversive.

Due to the failure to recognize her face, Buolamwini wears a white mask to test her project

(fig. 2). In a sense, this can be read as a performance of the title of Fanon's seminal work

Black Skin, White Masks adapted for the digital age. Buolamwini's performance highlights

the paradox of visibility embodied by black communities in the West. On the one hand, black

people are hyper-visible, as seen in the prevalence of the imagery of the Nigerian identity

fraud and the black criminal. On the other hand, black people are not represented in the data that trains the algorithms due to the lack of diversity in software engineering. As the black feminist scholar, Collins (1998: 38) writes, "surveillance seems designed to produce a particular effect — Black women remain visible yet silenced; their bodies become written by other texts, yet they remain powerless to speak for themselves." Thus, within the pretext of representational politics in biometric industries, Buolamwini's creation of her utopian technology illustrates a much-needed moment of a black woman writing facial recognition algorithms. However, given the knowledge of the violent practices of biometric capture and the surveillance of African diasporic communities addressed in this article, biometric failure creates opportunities for the development of new codes. These codes form new languages of resistance against the digital captivity or "machinic enslavement" of Nigerian and black migrants (Deleuze and Guattari 1989: 460).

Failure should not be mistaken for an antagonistic sentiment against Buolamwini's call for representation or support of criminal acts. In fact, biometric failure takes the call for representation even further, encouraging black migrants, artists, academics, and engineers to create new languages and codes of digital resistance. It calls for languages that fail in the ways defined by Halberstam's framing. Halberstam (2011: 88) frames failure as "a way of refusing to acquiesce to dominant logics of power and discipline." Bringing back Cesaire's (2000) definition of colonization as a system of domination, failure becomes anti-colonial. For Halberstam (2011), however, failure is a queer act of resistance that encourages losing one's way, "detouring and getting lost," and forgetfulness (Halberstam 2011: 24). It is a counter-hegemonic technique that supports the acceptance of the limitations of knowledge and alternative ways of living.

Failure is akin to Glissant's (1997: 20) notion of 'errantry' as a rejection of the "generalizing edict that summarized the world as something obvious and transparent,

claiming for it one presupposed sense and one destiny." For Glissant, errantry is a refusal of colonial knowledge that aims to codify and reduce everything it encounters. Linguistic forms such as American Ebonics, Antillean Creole, West African pidgin, and Caribbean Patios demonstrate an errantry in language. These languages are formed from acts of resistance against colonial power. They mix the words from indigenous and colonial languages, failing to abide by the rules or syntax of any given language. In addition, as Piper (2015) notes these languages are a form of encryption, as they aid the communication amongst those colonized. The failures in grammar and syntax meant that the colonial masters could not decipher the communication between the colonized people. It is in the mixture of failure, the disruption of the codification of race into technology, and the resistance to colonial capture that this paper pushes for the creation of an alternative system of coding—a computational creole.

Computational creole highlights the histories of radical black linguistic forms as a mode survival, as the language of colonial masters is reformulated with the aim of communicating with other captured people. As a multilingual system, computational creole demands, a looseness of syntax and grammar. It demands slippages, detours, and errantry. Furthermore, as a language through which racialized others communicate through machines, computational creole is a black digital linguistic system with the purpose of disrupting violent colonial algorithms. It is a new culture of programming that ascribes digital agency and subjecthood to black and migrant populations. Computational creole is a linguistic form of re-codification that does away with the colonial definition of blackness as criminality. Indeed, it is only within the refusal of the hegemonic system of capture that a dark-skinned black woman can create any utopian vision for herself. Computational creole, therefore, unlocks the possibilities of critically building tools with which black migrants can "dismantle the master's house" (Lorde 2007: 112).

According to Chun (2008: 323), "digital media's biggest impact on our lives is not through its interface, but through its algorithmic procedures." Chun asserts that we must look beyond the interfaces and executions to the failures of the source code. We must search for the system of coding that "obfuscates the vicissitudes of execution" (Chun 2008: 300). This means we must examine our machines and deeply understand how they function—what underlying grammars do they follow?

Conclusion

In this paper, I have stressed that biometric technologies rely on a grammar of race that is written into their code. These grammars are rooted in the history of colonial capture and strict codifications within this system. It is for this reason that this paper leaves the definition of computational creole open—to invite experimentations and explorations that centre freedom from digital captivity or surveillance. As I have emphasized biometric capture depends on the colonization—the reorganisation of the lives of communities—using specific grammars and codes. In this article, I have argued that the grammars in the capturing of the Nigerian and black community in the UK dates from the colonial eras into the 1960s. I have stressed that in order to break from the machinic captivity of biometric capture, new languages of resistance must be created. These languages must be designed with technological failure in mind, as it is only when the hostile system of the biometric captivation of black migrants fails that we can truly be free.

To argue that biometric technologies are simply neutral machines for the promotion of security and optimization of migration processes is to hide the legacy of colonial capture within them. It is to hide the violence they enforce in biometric borders. It is to hide the millions of migrants bound to the hostile biometric border. To argue that biometric technologies are apolitical objective tools is to ignore their discursive practices and to

undermine the radical possibilities of computational creole. What discourses are cited within the biometric capture room filled with black and brown bodies whose biological data will be used to subjugate them? What does it mean when black and African diasporic coders must compromise their identity for facial recognition? The more we deconstruct the discourses in computation and data capture, the more we uncover a system of colonial codes used to define and order black digital lives. This stresses the urgency for new systems—a demand for computational creole that disrupts the legacy code.

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