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NEUTRALIDADE TECNOLÓGICA: RECONHECIMENTO FACIAL E RACISMO

TECHNOLOGICAL NEUTRALITY: FACIAL RECOGNITION AND RACISM

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Abstract

As a consequence of social isolation policies, the current COVID-19 pandemic has intensified social inequalities and increased the usage of digital tools. A dual effect resulted from such a process: electronic devices being used as leisure objects and/or surveillance equipment. Thinking about the acceleration of the

virtualization of processes promoted by the pandemic, the current article deals with the utilization of technological devices by formal instances of control in Brazil that reproduce racism, albeit positioning themselves as neutral. The research discusses the instrumentalization of a racist criminal policy, especially that of facial recognition devices with law enforcement purposes in five Brazilian states, according to a study conducted by Instituto Igarapé. Guided by the inductive method and thorough literature review, the research explores the dilution of racism via digital devices, raising a question about technological neutrality. Thus, the article presents a brief mapping of the Brazilian scenario about criminal policies on facial recognition, as well as their application. A survey was also carried on searching the states that have adopted these policies, and their preliminary conclusions. Nevertheless, an investigation was developed on how the instrumentalization of technological devices configures and composes an actuarial criminal policy capable of accentuating and multiplying in other instances the racism that pervades our society.

Keywords: Japanese culture, Digital body, Confinement and creation

1 Introduction

This article was planned and written for the "We have never been so digital" call for papers of the V!RUS journal's 21st issue. The call points to studies related to the sanitary crisis caused by the new coronavirus and the displacements of the socialization methods to the Internet, mainly due to social distancing, amongst other impacts on a digital dimension. On the rise of these transformations, it becomes fundamental to think about the governmental responses to the contention of the pandemic, as well as about the complexity of social issues that happen in this context. Beyond these aforementioned displacements, that operate in different ways in different social groups, this global and national crisis has intensified structural problems in Brazil, such as racism and other oppression markers – class, gender, and sexuality, for example – that structurally aggravate the life of the population in the pandemic context.

We intend to reflect on the crossing between three emerging, intense questions: technological devices, racial inequalities, and measures taken by the state on the contention of the pandemic. On the intersection of the first two questions, important pieces of work were published recently, with an emphasis on the book Communities, algorithms, and digital activisms: Afrodiasporic views, organized by Tarcízio Silva, launched in 2020. Since we have never been so digital, it is crucial to think about social dynamics in this context, and especially about how racism and racial inequalities operate inside networks themselves. We can not ignore as well the huge divide between those who have the right to social distancing and those who do not, or those who are allowed or are not to access networks in times of lockdown:

> Clearly, social isolation as a means of safety and protection has been experimented with by upper and middle classes. For these social segments, albeit the inevitable inconveniences, staying inside their homes has been facultative, with the possibility of shopping online, working remotely, the use of appropriate face masks, the use of hand sanitizer, among so many other needed measures for the preservation of health. If, for these segments, social isolation has been translated as an exercise of guarantees, for the masses in poor black communities this process has meant privation and violence. The precariousness of housing in Brazilian suburbs, the lack of basic sanitation, and the difficult access to water are some of the factors that contribute to the fact that the prescription of social isolation and proper sanitation is not able to happen. (Flauzina, Pires, 2020, p. 71, our translation)

In another vertex, connecting the second and third questions, Flauzina and Pires (2020, p. 73, our translation) explain in a recent article that, beyond a more acute marker during the pandemic, "[…] racism is the ruler that measures the world and organizes the limits of adopted policies on the combat of the pandemic". Similarly, governmental actions are also related to the racial question: "Even if this is clearly the most vulnerable link of the pandemic, the reality of impoverished black people is not taken as the starting point to planning governmental actions." (Flauzina, Pires, 2020, p. 73, our translation).

From this starting point, we then shifted our attention to digital surveillance devices, especially to facial recognition technologies (broadly applied in some Asian countries on the facing of the pandemic[1]). We did not necessarily trace a problem temporaly situated within the COVID-19 pandemic, but approached from possible

tensions of the current scenario. Our objective here is to think about the implications of the utilization of such devices in a country where racism still plays a major role in structuring policies of killing, exclusion and social control of black bodies, which are aggravated in the pandemic context. We have dwelt mainly on the matters that involve the social control exerted by the state on the penal and technological sphere. Thus, this research aims to introduce the matter of the utilization of technological devices of facial recognition in Brazil, in a context of importing actuarial criminal policies with a particular racialized effect. Working with the inductive method, the distribution of punishment by the state was investigated from a distinction that programs the machine to automatize the secondary criminalization, which is to say, to recognize and identify "who the criminals are".

The failures on the differentiation of people by the devices demonstrated, before anything else, a governmental program and an utilized technique. The collection of information on individuals has elevated the capacity of the state in surveilling, controlling, organizing, inspecting and punishing through technological devices. These practices, however catalyzed by the current methodologies, are not new, as it is highlighted by Ruha Benjamin (2019) when pointing out the control of black population on digital domains and through technological devices, in a discriminatory form and culminating on their imprisonment, in a sort of a *New Jean Code*[2] or, in the words of Michelle Alexander, *The newest Jim Crow* (2018). The proliferation of electronic devices, the accessibility of digital tools, the expansion of the virtual world and the integration/incorporation with the physical world (Flusser, 2007) expose the feeling and the acknowledgement that we have never been so digital. However, despite having an impact on modern society, technological development by itself was not capable of modifying central elements of our way of living, in regards to the conservation of racism as a structural element of the conjuncture[3] – intensified by virtual devices.

Having in mind these matters about how racism percolates Brazilian society and conceals itself under the myth of cordiality[4], when we investigate facial recognition devices and their interaction with racism, we stumble upon a previous issue: technology itself, above all its programming and algorithms. This way, we look to comprehend using this relationship, between facial recognition and race, if there is such a thing as neutrality in technology. For that, on a first topic, we cover the relation between race and technology on the polysemy of the term *Black Software*, mainly with the contributions of McIlwain (2020) about the technological revolution in the United States. Subsequently, we recur to the recent literature of Afro-American women about the behavior of machines and algorithms that are progressively composing the formal institution of control. Finally, collating similar studies in the United States, we investigate the importing of criminal policies in the national scenario that have facial recognition as the main instrument, showing in which states they were implemented, and which were their preliminary results.

2 Race and technology

The Project of modernity is a colonizing project that has racism as a structure of foundation and maintenance (Almeida, 2018; Quijano, 2005; Foucault, 2003; Duarte et al., 2016). The notion of racism precedes the conception of what is understood by race. Race is a non-static concept, but historical[5] and relational[6]. Racism, therefore, "[...] is a systematic form of discrimination that has race as a fundamental, and that manifests through conscious or subconscious practices that culminate in disadvantages or privileges to individuals, depending on the racial group they are part of." (Almeida, 2018, p. 25, our translation). It is racism, comprehended as a tool of power, of social hierarchization and stratification, that maintains the black population on the worse social indicators, inciting the processes of exclusion and inequalities. Thinking about technology and the virtual world from a racial perspective – inserted in the colonizer/modernizer axis – can be organized as follows: how are the technological devices, machines, companies, the condition for the access to technology constituted, that is to say, historically analyzing the processes of formation and development of both the company that fabricates the equipment and the equipment itself (McIlwain, 2020).

The development of technology during the 20th century fundamentally involved segregation in its elaboration process: thinking about the United States, the very creation of devices, machines and appliances that compose the digital domain has the segregation and subordination of the black population as its pre-condition, unless when it's used to control it, as presented by McIlwain on the polysemy of the concept of *Black Software*:

> For me, "black software" conjures the myriad ways that we mobilize computing technology. Black Software refers to the programs we desire and design computers to run. It refers to who designs the program, for what purposes, and what or who becomes its object or data. It refers to how, and how well, the computer performs the tasks for which it was programmed. (McIlwain, 2020, p. 7)

Black population takes part in the technological revolution mainly when it is its object of control, in a mechanism that associates companies, governments and devices. The expansion of formal control (penal) over this group is exemplified not only by the facial recognition program tackled on this research[7] – historically this technology consists of one more control tool. Like any other domination device, technology looks for its veil of legitimacy: the key-elements of social control (such as race, gender and class) are generally followed by a statement of justification that makes it acceptable, logical, even inevitable or natural. In the case of technological devices, the legitimacy happens through a supposed technological neutrality. This claim follows the incorporation of the technology in the criminal justice system. This, as a privileged domain of social control, has sought refuge in different anchorages. If, in its foundation, it was legitimized under discourses of violation of the social pact and – subsequently, but without ever abandoning this premise – in the pathologizing of crime (Duarte, 2016), today it seeks its reasoning through the means of a technological neutrality that aims to exempt its operators of intentionality and discrimination. The reasoning is always one that removes conscious decision-making processes that criminalize (control) specific segments of the population (Dieter, 2012).

Therefore, remembering the *prison fix* proposed by Ruth Gilmore (2007) as a North-American policy for construction of jails and increasing imprisonment as a unidimensional solution for the multiplicities of social conflicts, we can approximate in the studies of Ruha Benjamin (2019) the polysemy of the *tech fix* as a solution to the problems of the contemporaneity. Not only the solution and harmonization of social conflict through imprisonment, but through the objectiveness of technology. The reparation through technology, the usage of the term *fix*, also designates to the author the capacity of stabilizing, identifying and marking the black population to then distribute it and keep untouched the structures of domination. It also includes the process of accumulation of information by specific companies[8] and the potential of data as a new form of racialized control.

3 Can robots be racists?

Studies on the interaction between race and technology in Brazil are still relatively scarce, among which stands out the newly launched book "Communities, algorithms and digital activisms: Afrodiasporic views", organized by Tarcízio Silva. However, internationally, in face of the current problems, more and more authors dedicate themselves to thinking and deconstructing the neutrality of algorithms (O'Neil, 2016), their composition (Chun, 2011) and how they retake a project of surveillance and control of the black population (Brown, 2015). Would technology, as a total exclusion of subjectivity through automation, be exempt from the possibility of discrimination? On the defense of virtual and mechanical devices, are the arguments that, in the absence of a human intention, they would possess a "zero degree" objectivity, which would hinder discrimination and injustice: pure science. Ruha Benjamin (2019) reminds us of some events that puts this premise at stake: virtual classification, though the Google search tool, of black people as gorillas; phone app that classifies users in a aesthetical scale – out of the first 50 classified, only 6 people were black; the company HP, which did not recognize black faces in their technology equipment, due to "low luminosity"; Kodak, that, in the process of photo developing, made visible only the eyes and smiles of black people, among other facts that are generally treated and exceptionalities to the technological objectivity.

We asked: can robots be racists? The question is previously rejected by modern thinkers that argue the absence of subjectivity in the machine. However, the answer is very clear and affirmative: robots can be racists. They are due to the programming that configures them, as well as to the programmer that organizes its codes, and to the company that develops an object thought for a specific purpose (Benjamin, 2019). The reiterated cases of racism in the virtual domain do not constitute failures, mistakes, system misalignments. On the contrary, they reflect the perspective of those who build the codes and elect their interests above others, mirrored in the execution of software as a form of assuring domination in other fields (Benjamin, 2019). Facial recognition devices work through algorithms that, in turn, act as lines of code, composing a model that will serve as a reference to the machine. Programming a machine is inserting base data that ordinate the functioning of the whole. They are models based on the past that have their capacity limited to parameters inserted through precedent data (O'Neil, 2016, p. 40).

In order to improve any automated system, algorithms must continuously receive feedback about what they develop. That is to say, a response about the precision of what they calculate, improving the pre-existing model so that it updates itself with the becoming. Without this feedback, the system continues spinning aimlessly without ever learning from its mistakes (O'Neil, 2016). Nevertheless, this feedback does not guarantee the learning of the system and the starting data may lead to a looping effect. This effect positively feeds back the initial programming without the system ever being able to correct failures, on the contrary, it improves itself in creating a reality, spinning aimlessly and reproducing the initial programming indefinitely.

The problem that is relevant to any algorithmic model has especially harmful effects when used as a social control tool. Models for police enforcement work through the calculation of police registration based on past occurrences (city, time of the day, place, type of crime), creating criminal risk zones, to identify chances of recurrences and made police enforcement more efficient (O'Neil, 2016, p. 75). This would be the case if the criminal matter was neutral in advance. The initial numbers inserted in these codes are, in fact, firstly resultant of a political decision over which conducts are subject to criminalization and which individual will be more subject to police action. A police force guided by the "war on drugs" and focused on crimes against patrimony will center its activity in certain territories, already vulnerable and targeted by police action (Alexander, 2010; Batista, 2011; Andrade, 2012; Leal, 2017).

With a larger police presence, new crimes are intercepted. O' Neil (2016) exposes the North-American practice of checking suspect individuals. According to his research, in the last decade this practice increased 600%, being 85% of the approached individuals black or Latino. Of these checks, only 0.1% of the individuals approached were connected to a violent crime. This efficiency does not matter anymore. If this data composes and successively orders the intensification of police patrolling in regions already patrolled, it generates a loop in the system. As a form of creative exercise, let's imagine the same map of risk zones, but now fed by other data, data linked to tax evasion crimes. The device would signal to be careful when entering specific neighborhoods, under the risk of a tax evasion crime (Benjamin, 2019). Consequently, the police presence in these areas would increase, intercepting more and more criminal conducts, intensifying police action, among other situations. Maybe this way one could imagine the SWAT team entering the noble neighborhoods of Chicago (O'Neil, 2016), or maybe in Brazil the BOPE team violently invading the prestigious districts of São Paulo.

4 Facial recognition in Brazil

On the use of facial recognition in Brazil, the paper *Regulation of facial recognition in the public sector*, published in June 2020 by the Instituto Igarapé and Data Privacy Brazil (Francisco et al., 2020), defines crucial aspects of the debate, comparing laws concerning this topic in England, France, and the United States. In these three countries, we can find respectively: the incorporation of data protection policy to the current legislation; laws that demand express approval by the user on the possible uses of the information provided, and laws that prevent the usage of data obtained virtually on behalf of companies and the government. Another study, carried out by Instituto Igarapé, showed that, until 2019, 16 Brazilian states had used facial recognition technology, across 30 cities (Instituto Igarapé, 2019). This encapsulates 48 private businesses distributed across several areas, such as transport (21), public safety (13), education (5), border control (4), and others (4) (Instituto Igarapé, 2019). The transportation sector uses technology to reduce fraud related to free public transportation. The Education domain employs this technology to control students' class attendance rates, while in public safety it is used to identify and search for fugitives.

On the judicial control of these technologies, in spite of the *General Law of Personal Data Protection* nº 13.709/2018, the Brazilian government issued the Administrative Ruling nº 793/2019, that designates the utilization of Money from the National Public Security Fund to the "promotion of the implementation of video monitoring systems with facial recognition solutions through *Optical Character Recognition* - OCR, use of artificial intelligence or others". The ruling represents the stimulus to facial recognition policies without, in counterpart, developing a control and limitation benchmark to these devices, that are already used in police activity.

Currently, the intensification that we refer to operates towards criminal policies that work with efficiency. The usage of facial recognition technologies marks the reproduction of structural racism in a different area – the technological one –, while at the same time evading criticism under the shelter of scientific technological neutrality. The usage of these instruments constitutes an actuarial control policy, that corresponds to a process originally American of developing tables and tests of recidivism calculation. This technique, initially destined to criminal execution, starts to integrate criminal policies regarding police enforcement (Dieter, 2012, P.84). The efficiency, therefore, is measured by the specific recidivism that will be translated as risk. Thus, we have the development of a criminal police that justifies itself on the search for arresting less and concentrating their efforts in arresting "better", in selecting high-risk individuals, supposedly responsible for the majority of the committed crimes.

In theory, guiding police enforcement actions and court decisions through the linking to items that constitute the risk calculation, its agents (police officers and judges) would have less margin of discretion[9] and the racist practices of these spaces would be reduced. It's quite literally about the automation of criminalization processes. On the contrary of what was proposed, the adoption of the actuarial criminal policy was decisive in the increase of incarceration of the black population in the United States (Dieter, 2012; Alexander, 2010). If we comprehend what an actuarial criminal policy means, mainly in regards to the automation social/criminal control over secondary criminalization, the use of facial recognition as a criminal policy in Brazil emerges in all

its glory, urging the debate about how it contributes and shall contribute to a mass incarceration and to the strengthening and reproduction of discrimination, repression and reclusion of the black population.

In 2019, a network of public safety observatories studied violence and the usage of racial recognition as a public safety measure and as a criminal policy in five different states of the country, for a period of five months. From the report it surfaces that the idea that efficiency through technology finds no support: in Bahia, during carnival, the facial recognition system identified over 1,300,000 faces, generating 903 alerts, 18 mandates and the detention of 15 people, in other words, 96% of notifications were useless (Nunes, 2019). From the obtained data on the profile of inmates incarcerated through facial recognition, 87.9% of all suspects were men and 12.1% were women, on race, 90;5% of all people were black and 9.5 were while. The police checking was mainly motivated by theft and drug traffic felonies (Nunes, 2019, p. 69).

Racial discrimination through facial recognition is not limited to Brazil. In the studies of Garvie and Frankle (2016) it was already pointed that the devices utilized by American police were twice as likely to recognize and differentiate black faces than white ones, leading to the intensification of vigilance over the black population through false positives. These failures, as we have previously indicated, are built preliminarily upon the engineering and maintenance options of these devices. In this regard, racial bias does not happen through the intentionality of the machine, but through a series of bindings in its construction – involving its developers and operators, such as in the image database utilized to "train" the facial recognition algorithm (Garvie, Frankle, 2016).

The research done by the authors reinforces the element of race as relational and circumscriptive. This is due to the fact that devices developed in other regions of the world, according to Patrick J. Grother, George W. Quinn and Jonathon Phillips (2011) through the *National Institute of Standards and Technology (NIST)* on a report that measured the advances of this technology, verified that the technologies developed in China, Japan and South Korea recognized Caucasian features more easily than others. The research, while comparing different companies that work with facial recognition, found subtle differences when it comes to gender, age and weight, but highlighted a significant difference on the precision of recognition regarding race: the overall performance of the devices is directly linked to the image database utilized to train the machine and targets a specific demographic group (Grother et al., 2011).

Nearly ten years later, the same institute launched a new research comparing 18,270,000 images and 8,490,000 people, utilizing 189 of the more commercialized algorithms made by 99 different companies, in which it verified the persistence of the problem identified on the previous study concerning the centrality that each algorithms allocates to a given physiognomy from the region in which it is produced (Groter et al., 2019). The conclusions were even more serious: false positives are higher on African-American, East and South Asian and Central American individuals, respectively. The individuals with the lesser number of false positives are white European or American men. In contrast, false negatives are majorly reported on black population (Groter et al., 2019). This visibility trap, that sometimes erases, and other times highlights the black population, is Always done in a context. The relational element of race shows the ethnocentric perspective of algorithms and, in Brazil, presents a special harmful effect to the black population.

5 Conclusions

Due to the recent importing and implementation of the tool, researches on facial recognition in Brazil are still scarce. Yet preliminary studies and data on the profile of those targeted by this technology indicate the reproduction of racial selectivity of the criminalizing programming. In this sense, Nunes (2019) writes:

> Although for some facial recognition technology might seem like a mysterious novelty and uncertain in its results, for young black males it has represented the assurance that they will keep being preferred on checking, in the name of the "war on drugs". Facial recognition has been showing itself as a high-tech update to the old and well-known racism that is in the base of the criminal justice system and has guided police work for decades. (Nunes, 2019, p. 69-70, our translation)

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Before this scenario, three research horizons are shown to be crucial: 1) Juridical studies on the search for a limiting legislation of the governmental action under the new technologies, especially in their most violent front (criminal justice system); 2) Researches focused on analysis the impacts of the utilization of facial

recognition in secondary criminalization; 3) Studies that stress the racial grammar on the programming of these devices.

Ultimately, the current paper aimed to demonstrate that technology is not devoid of intentions, it's not neutral, and that the programming of its devices, coded to recognize the white pattern, implies reproduction of racism on the potentiality of undertaking the incarceration of the black population through the "false positives", which demonstrate the incapability of the devices to recognize non-white faces, and implies in a generalization of black as guilty. As a reboot of the actuarial criminal policy, facial recognition is not neutral. Its programming amplifies and automates the already racialized process of secondary criminalization but adding the machine element to the human agent. Above all, the institutional functioning anchored in what is white standardizes violence compared to what is not white. Such a consequence provokes a debate about juridical regulation of these devices, beyond a critical discussion.

The context in which we live in today, transversed through the pandemic caused by COVID-19, only shows that which the black movement and other black intellectuals have already been exposing: racism, alongside other interwoven markers of oppression, structures the country's inequalities. Through technological means or not, anchored under a supposed neutrality, it is that the state acts as an aggravating agent to what Abdias do Nascimento (1978) called the genocide of the black population, not only as a physical death, which keeps being fed by racism. To not question the social indicator of poverty and exclusion imposed to the black population in several contexts means to keep naturalizing racism and denying it as a generator of violence, inequality and exclusion.

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1 On this subject, the South Korean philosopher Byung Chul-Han explains the whole infrastructure of digital surveillance that has its utilization intensified to the contention of the pandemic in China (Han, 2020).

2 Jean Code is a reference that the author makes to the policies of racial segregation adopted by the United States on the 20th and 21st centuries, albeit also dialoguing with the era of mass incarceration – centered on the black population – that grows vertiginously starting for the 60's and is exposed by Michelle Alexander

(2010) in "The New Segregation" originally written in 2010 with the title "The new Jim Crow". Ruha's reference to Michelle is explicit and orientates the axis of the racialized social-penal control while exploring the technological facets.

3 On the definition of structural racism, refer to the contributions of Silvio Almeida, according to who "the institutions are racists because society is racist" (Almeida, 2018, p.36). Racism is part of the social order, stems from its own structure and from the way in which political, economic and legal relations are constituted and developed through the social tissue. It's not a flaw, individual or constitutional, that might transpose through occasional actions.

4 Unlike in the USA, that has gone through a rigid racial segregation regime after the abolishment of slavery, in Brazil we live under the "myth of racial democracy". This concept means that, even after the indigenous genocide and over 300 years of slavery of the black population, especially with racial whitening policies, and after the abolishment of slavery, miscegenation would compose the Brazilian people from the union of those three races, "living together harmoniously". This is the reason there would be no racism (Santana, Bicalho, 2019). This narrative is contrasted by the material reality in which these populations are the most vulnerable, either due to the absence of the state (public policies on health and assistance), or for its direct actuation through violence (especially via the legal system).

5 According to Almeida (2018, p. 19, our translation) "Race is not a fixed, static term. Its meaning is inevitably associated with the historical circumstance in which it's used. Behind the race there is always contingency, conflict, power and decision, of a kind that it's about a *relational and historical* concept. This way, the history of race or races is always the history of the political and economic constitution of contemporaneous societies.

6 Race is relational inasmuch as it must be comprehended not only by the population that suffers discrimination based on race, but also on the understand of how whiteness must be related in this studies, be it to aggregate the idea of Race to whites, be it as a way of highlighting the privileges that maintain themselves on the dynamic of structural racism established in society. Refer to the studies on whiteness of Lia Vainer Schucman (2012).

7 In the US, mass incarceration, that falls mainly on the black population, was accompanied by technicist tendencies, allied to the argument of "Law and Order", and the actuarial practices of the appliance of law. (Alexander, 2010; Dieter, 2012).

8 McKenzie Wark (2019) points to the birth and consolidation of a new class, the *vectorial class* whose power resides in the possession of information and data and information control. They control patents, buy brands and monopolize the domain over information to maintain centralized the domain over data generated through the most diverse digital forms, taking information itself as a sort of a commodity.

9 By discretion, it's understood that the degree of arbitrariness involved in the decision-making process of the agent, in a sense of how much this agent can act according to his own consciousness and in a manner not linked to the law, or in the space reserved by the law for this agent to take his own decisions.