

Lauren Blumenthal

Professor Yazbec

English Composition 105

25 March 2020

Reels of Racism

There is no denying that America has a racist past. Until 1865, slavery was legal in the United States. After the passing of the 13th amendment, racism was still very prominent in our society. The 1960s brought about a strong movement fighting for racial equality. While many advancements towards equality were implemented as a result of the civil rights movement, such as the removal of segregation in public institutions, racism was never eradicated. In some industries, such as photography, such racism was never addressed for the purpose of equality. Even today, facial recognition technology has the habit of being racist in one regard or another. Issues regarding the analysis and treatment of individuals with non-caucasian skin tones has been an issue for decades.

Cameras have been around for quite some time. The first concept of a camera can be traced as far back as 1021 to an Iraqi scientist and writer, Alhazen Hasan Ibn al-Haytham (Misachi). His book "Book of Optics" discusses a camera obscura. Camera obscuras, which are essentially a condensed version of what we know of as pinhole cameras, were the pioneer to the photographic camera. Camera obscuras are the ancestor of the photographic camera and modern photography.

The Latin name means 'dark chamber,' and the earliest versions, dating to antiquity, consisted of small darkened rooms with light admitted through a single

tiny hole. The result was that an inverted image of the outside scene was cast on the opposite wall, which was usually whitened. For centuries the technique was used for viewing eclipses of the Sun without endangering the eyes and, by the 16th century, as an aid to drawing; the subject was posed outside and the image reflected on a piece of drawing paper for the artist to trace. Portable versions were built, followed by smaller and even pocket models; the interior of the box was painted black and the image reflected by an angled mirror so that it could be viewed right side up. The introduction of a light-sensitive plate by J.-N. Niepce created photography (The Editors of Encyclopaedia Britannica).

Silver-coated light-sensitive plates were later introduced to the camera obscura, this was the precursor to film. Early cameras were gigantic and the photos were not particularly permanent.

The first portable camera was designed by Johann Zahn in 1685. It was not until the year 1814 when Joseph Nicéphore Niepce clicked the first photograph. The credit for the invention of the first camera is therefore co-shared between Johann Zahn and Joseph Nicéphore Niepce. The photo taken by Nicéphore was not permanent. It was taken using a camera he made on his own, on a paper coated with silver chloride. The regions that were not exposed to light on the paper became dark. Louis Daguerre is given the credits for inventing the first ever practical photography in 1829. It took Daguerre over a decade attempting to come up with an effective method for the photography. All the progress Daquerre made was in partnership with the Nicéphore. The ownership rights were sold to the French Government, which in turn took the responsibility of developing

daguerreotype studios in different parts of the country. Alexander Walcott invented the first camera that produced photos that did not fade quickly (Misachi).

As time progressed, cameras became smaller, and photos became more permanent and in focus, until we eventually evolved into “modern” film photography.

Early film photography was not tolerant of dark skin tones. Early colour film processing was based off of a Shirley Card—a card picturing a white woman who was an employee of Kodak and modeled for the colour processing card (Barco). This card was an essential tool to film developers because it was used to ensure a proper colour balance (Color Film Was Built for White People. Here's What It Did to Dark Skin). Kodak sent original, undeveloped prints to Kodak developers to ensure independent processors were meeting Kodak standards (Barco). Kodak sent out these new, unprocessed photos to developers so that they could practice on a "perfect baseline photo." The Shirley model would have to sit for hundreds of smiling photos—a grueling process for the original model and any subsequent replacements. While it was great to have Shirley cards to ensure a proper colour balance when developing film, there was one big problem: Shirley was white. Early colour film did not allow for tones consisting of reds and browns to be processed (Color Film Was Built for White People. Here's What It Did to Dark Skin).

Colour film works by having multiple layers of light-sensitive chemicals on a strip of plastic (what we call film). The three layers respond to the various colours of light - red, green and blue. When a film strip is exposed to light, these light-sensitive chemicals are activated and can be processed into a film negative (Color Film Was Built for White People. Here's What It

Did to Dark Skin). Until the 1990s, color film was void of the chemicals needed to capture reds, browns, and yellows (Color Film Was Built for White People. Here's What It Did to Dark Skin). When white skin was photographed, the picture looked accurate. When darkened skin was photographed, however, the skin looked “clipped out” (Color Film Was Built for White People. Here's What It Did to Dark Skin). On film, dark skin lacked variation in tone and was typically jet black (Color Film Was Built for White People. Here's What It Did to Dark Skin). This was especially a problem in photos of mixed race because the film could not compensate for various skin types in the same scene (Color Film Was Built for White People. Here's What It Did to Dark Skin). In the early years of colour photography, the consumer market was primarily white, so to film companies, there never seemed to be much need to develop racial-friendly film (Barco). It was not until the 1970s that film got the update it so desperately needed. Chocolatiers and furniture companies voiced their concerns to film companies because varying brown tones could not be distinguished in product photos (Color Film Was Built for White People. Here's What It Did to Dark Skin). Had chocolatiers not complained about film’s inability to display the difference between milk chocolate and dark chocolate, or furniture makers complaining about the lack of variation of wood stains in photos, who knows what it would have taken to bring about change in the film industry. This was just the beginning of change in the film and photography industry.

As time progressed, the inclusion of actors with varying skin tones became more common in mainstream media, and the issues with film became more apparent than ever (Color Film Was Built for White People. Here's What It Did to Dark Skin). In the 1990s, a team of designers in Holland developed a camera called the LDK camera (Color Film Was Built for

White People. Here's What It Did to Dark Skin). This camera used two separate computer chips to capture light and dark skin tones separately. This major advancement in film technology was supported by people like Oprah Winfrey and the Black Entertainment Television (BET) network (Color Film Was Built for White People. Here's What It Did to Dark Skin). Kodak released “Kodak Gold” film which promoted its better colour range, and even claimed to be able to capture a photo of “a dark horse in low light” (Color Film Was Built for White People. Here's What It Did to Dark Skin). It was around this time that other ethnicities of Shirley Cards were introduced. The problem here is that these “ethnically diverse” Shirley Card models were often fair skinned. Despite there being an ethnic difference, the skin tones depicted were typically still of the lighter variety (NPR). Even the efforts to be inclusive lacked diversity.

While today we view film technology as antiquated, to say the least, we are not free from racially insensitive technology. Underlying racism is still found in our “advanced” technology. In 2015, Google technology was found to have labeled photos of dark-skinned people as gorillas (Guynn). While this was not intentional, there was no way for Google to fix the technology so they merely omitted the term “gorilla” from the list of photo tags. Facial tracking software has also displayed its fair share of challenges. In multiple videos, dark-skinned individuals demonstrate the lack of accuracy with facial recognition (About Face: One Woman’s Quest To Make AI Less Biased). In some cases, facial recognition software cannot pick up facial features on darker-skinned people. Asian individuals are facing discrimination as well. Facial recognition has a habit of labeling almond shaped eyes as “closed”. One New Zealand man by the name of Richard Lee had his passport photo rejected when the photo software labeled him as having closed eyes (Griffiths). He is Asian.

Issues with subliminally racist technology ties into a larger issue of systemic racism.

'You good?' a man asked two narcotics detectives late in the summer of 2015. The detectives had just finished an undercover drug deal in Brentwood, a predominantly black neighborhood in Jacksonville, Florida, that is among the poorest in the country, when the man unexpectedly approached them. One of the detectives responded that he was looking for \$50 worth of 'hard'— slang for crack cocaine. The man disappeared into a nearby apartment and came back out to fulfill the detective's request, swapping the drugs for money. 'You see me around, my name is Midnight,' the dealer said as he left. Before Midnight departed, one of the detectives was able to take several photos of him, discreetly snapping pictures with his phone held to his ear as though he were taking a call. Two weeks later, police wanted to make the arrest. The only information they had about the dealer were the smartphone pictures, the address where the exchange had taken place, and the nickname Midnight. Stumped, the Jacksonville sheriff's office turned to a new tool to help them track down the dealer: facial recognition software. The technology helped them pin down a suspect named Willie Lynch. Lynch, who has been described by close observers of the case such as Georgetown University researcher Clare Garvie as a 'highly intelligent, highly motivated individual' despite only having graduated high school – he even filed his own case motions, which could be mistaken for ones written by an actual lawyer – was eventually convicted and sentenced to eight years in prison. He is now appealing his conviction. Whether or not Willie Lynch is 'Midnight' remains to be seen. But

many experts see the facial recognition technology used against him as flawed, especially against black individuals. Moreover, the way the Jacksonville sheriff's office used the technology – as the basis for identifying and arresting Lynch, not as one component of a case supported by firmer evidence – makes his conviction even more questionable. The methods used to convict Lynch weren't made clear during his court case. The Jacksonville sheriff's office initially didn't even disclose that they had used facial recognition software. Instead, they claimed to have used a mugshot database to identify Lynch on the basis of a single photo that the detectives had taken the night of the exchange (Breland).

“If you're black, you're more likely to be subjected to this technology and the technology is more likely to be wrong,” House oversight committee ranking member Elijah Cummings said in a congressional hearing on law enforcement's use of facial recognition software in March 2017. “That's a hell of a combination.” (Breland) The Federal Bureau of Investigation has found that modern facial recognition technology. This technology cannot be relied on knowing how inconsistent it is.

Research has shown that AI algorithms may favour facial structures more common amongst people of lighter skin.

Experts such as Joy Buolamwini, a researcher at the MIT Media Lab, think that facial recognition software has problems recognizing black faces because its algorithms are usually written by white engineers who dominate the technology sector. These engineers build on pre-existing code libraries, typically written by

other white engineers. As the coder constructs the algorithms, they focus on facial features that may be more visible in one race, but not another. These considerations can stem from previous research on facial recognition techniques and practices, which may have its own biases, or the engineer's own experiences and understanding. The code that results is geared to focus on white faces, and mostly tested on white subjects. And even though the software is built to get smarter and more accurate with machine learning techniques, the training data sets it uses are often composed of white faces. The code 'learns' by looking at more white people – which doesn't help it improve with a diverse array of races (Breland).

Systemic racism is a huge problem in our country, whether we know it or not.

Identification in general poses many issues, especially for people of colour. Artificial intelligence is not alone in misidentifying people of colour. According to The National Registry of Exonerations, “Nearly half of the 2,000 people exonerated of crimes since 1989 are black. Over that period, exonerations were most common for murder, sexual assault and drug crimes.” (Chokshi). “Black Americans are arrested 2.5 times more often than white Americans” (Cop Caught Arresting the Wrong Man in Racial Profiling Incident | NowThis). While the exoneration of black individuals may seem positive, it goes to show how black people are assumed guilty more often than white people are. Whether people realise it or not, our justice system has proven to be negatively biased towards people of colour. In an interview with a man of Jamaican descent identified only as “Mark,” he told his story about being wrongfully arrested. “When I was 11 years old, I got pulled over, handcuffed, and put in the back of a police car because they said that

I fit the description of someone that they were searching for. But, [the police] said that because I wasn't sweating, it wasn't me. The guy that they were looking for was running from them and it was hot that day, so that's why they let me go. It's a good thing I wasn't sweating." (Racial Profiling by Stores, Landlords and Companies: Are We Racist? (CBC Marketplace)) Mark was arrested purely because he fit a description, and was only let go on the basis of not being sweaty. A viral video from 2019 showed a black man with dreads being wrongfully detained by police on his front lawn (Cop Caught Arresting the Wrong Man in Racial Profiling Incident | NowThis). During the incident, the leading officer repeatedly called the black man by the wrong name and insisted that he had a warrant for his arrest out of Louisiana (mind you the black man was not from Louisiana) (Cop Caught Arresting the Wrong Man in Racial Profiling Incident | NowThis). The officers demanded the unidentified black man show his ID. This is not mandatory in their state of Texas unless the person is being arrested (which he was not) (Cop Caught Arresting the Wrong Man in Racial Profiling Incident | NowThis). After a second officer was called to the scene and a mugshot was procured, the black man was let go because he did not match the photo (Cop Caught Arresting the Wrong Man in Racial Profiling Incident | NowThis) And why was he stopped in the first place? The officers said because the dog did not belong to the black man, despite the unidentified man willing to show papers for the dog (Cop Caught Arresting the Wrong Man in Racial Profiling Incident | NowThis). A lawsuit and investigation has since been filed on the basis of racial profiling (Cop Caught Arresting the Wrong Man in Racial Profiling Incident | NowThis). Many governments have laws in place that are designed around the concept of racial profiling, despite these laws being considered "safe, fair and preventative". One of the most widely known of these laws, especially since Michael Bloomberg's recent yet short-lived

political run, is the “Stop and Frisk” policy in New York. In a nutshell, the Stop and Frisk law allows police to stop and frisk anyone they deem “suspicious”. According to a Cornell Law School definition, “the police must have a reasonable suspicion that a crime has been, is being, or is about to be committed by the suspect” (Stop and Frisk). The issue here is that humans are not unbiased. In 2017, 90% of people stopped in New York were black or hispanic despite these races only making up about half of New York City’s population (United States, Congress). Without seeing someone in the act of committing a crime, assuming someone will commit a crime is purely based on profiling, which unfortunately, is typically racially charged. Research has shown that white Americans are more likely to confuse black people with one another, than other white people (Swarns) . This is further supported by the sheer amount of black individuals wrongly accused of crimes.

Even today, we see this issue of racial profiling becoming a major issue in regard to the Novel Coronavirus pandemic. In April of 2020, The Center for Disease Control and Prevention (CDC) announced that it “recommends [people should be] wearing cloth face coverings in public settings” (Recommendation Regarding the Use of Cloth Face Coverings). This can be problematic for people of colour. Many people of colour, especially dark-skinned men, are afraid because, “As the coronavirus continues to spread, infecting and killing African-Americans at disproportionately high rates, black men find themselves facing two concerns: the virus and those who see their covered faces as threatening” (Taylor). Aaron Thomas, a man from Ohio, tweeted after the CDC’s announcement regarding face coverings. His tweet read, “I don’t feel safe wearing a handkerchief or something else that isn’t CLEARLY a protective mask covering

my face to the store because I am a Black man living in this world. I want to stay alive but I also want to stay alive” (Taylor).

It is unclear how many profiling incidents there have been since the C.D.C. issued its recommendation earlier this month. Melanye Price, a political-science professor at Prairie View A&M University, a historically black university in Texas, said the pandemic and the C.D.C.'s mask recommendation, however well-intentioned, could put African-Americans at greater risk.

‘I think in the end we are asking a lot from people who are asked to be safe by putting these masks or bandannas on,’ Ms. Price said. ‘If somebody called the police on them, they could lose their life over policing before the coronavirus could ever get to them.’

Kevin Gaines, the Julian Bond professor of civil rights and social justice at the University of Virginia, said the recent episodes of racial profiling were not surprising.

‘Black people are profiled by police on a regular basis,’ Mr. Gaines said. ‘And actually, the problem, at least recently, has become even larger than that.’

‘Some black men modify how they dress in order to appear less threatening to others, Mr. Gaines said, adding that the behavior is a product of a segregated society. ‘Many whites are just uncomfortable encountering many black people,

pandemic or no pandemic, masks or no masks, and those fears may manifest in ways that lead to profiling' (Taylor).

With a “stop and frisk” mentality, it could be easy to misconstrue a coloured handkerchief over the face as a gang uniform, rather than a life-saving protective measure.

While our modern issues with technology are much different than the issues of yesteryear, it is no secret that our technology favours lighter skin and European ethnicities. Colour film photography was nearly impossible to use on dark-coloured skin. Our so-called “modern advanced technology” is still doing a poor job of treating all ethnicities fairly. Issues regarding the analysis and treatment of non-caucasian skin tones have been a problem for decades. Our society is still segregated. We live in a world plagued with racism, obvious or not. Systemic racism is prevalent in our society. White people have the upper hand when it comes to fair treatment in our modern world. Hopefully, one day technology and society will evolve from its ignorant, antiquated biases and treat all people equally regardless of any differences or preconceived notions based on race.

Works Cited

- “About Face: One Woman’s Quest To Make AI Less Biased.” *YouTube*, NBC News, 4 Feb. 2019, <https://www.youtube.com/watch?v=nXurp5s7n6c>.
- Barco, Mandalit del. “How Kodak's Shirley Cards Set Photography's Skin-Tone Standard.” *NPR*, NPR, 13 Nov. 2014, www.npr.org/2014/11/13/363517842/for-decades-kodak-s-shirley-cards-set-photography-s-skin-tone-standard.
- Breland, Ali. “How White Engineers Built Racist Code – and Why It's Dangerous for Black People.” *The Guardian*, Guardian News and Media, 4 Dec. 2017, www.theguardian.com/technology/2017/dec/04/racist-facial-recognition-white-coders-black-people-police.
- Chokshi, Niraj. “Black People More Likely to Be Wrongfully Convicted of Murder, Study Shows.” *The New York Times*, The New York Times, 7 Mar. 2017, www.nytimes.com/2017/03/07/us/wrongful-convictions-race-exoneration.html?smprod=nytcore-iphone&smid=nytcore-iphone-share.
- “Color Film Was Built for White People. Here's What It Did to Dark Skin.” *YouTube*, Vox, 18 Sept. 2015, <https://www.youtube.com/watch?v=d16LNHIEJzs&t=29s>.

“Cop Caught Arresting the Wrong Man in Racial Profiling Incident | NowThis.” *YouTube*,
NowThis News, 14 May 2019, https://www.youtube.com/watch?v=y6Q1qqMp5_o.

Griffiths, James. “New Zealand Passport Robot Thinks This Asian Man's Eyes Are Closed.”
CNN, Cable News Network, 9 Dec. 2016,
www.cnn.com/2016/12/07/asia/new-zealand-passport-robot-asian-trnd/index.html.

Guynn, Jessica. “Google Photos Labeled Black People 'Gorillas'.” *USA Today*, Gannett Satellite
Information Network, 1 July 2015,
www.usatoday.com/story/tech/2015/07/01/google-apologizes-after-photos-identify-black-people-as-gorillas/29567465/.

Misachi, John. “Who Invented the First Camera?” *WorldAtlas*, WorldAtlas, 17 May 2018,
www.worldatlas.com/articles/who-invented-the-first-camera.html.

“Racial Profiling by Stores, Landlords and Companies: Are We Racist? (CBC Marketplace).”
YouTube, CBC News, 26 Feb. 2016,
<https://www.youtube.com/watch?v=WjmDwWUhEpg>.

“Recommendation Regarding the Use of Cloth Face Coverings.” *Centers for Disease Control
and Prevention*, Centers for Disease Control and Prevention, 3 Apr. 2020,
www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/cloth-face-cover.html.

“Stop and Frisk.” *Legal Information Institute*, Legal Information Institute,
www.law.cornell.edu/wex/stop_and_frisk.

Swarns, Rachel L. “The Science Behind 'They All Look Alike to Me'.” *The New York Times*, The New York Times, 20 Sept. 2015,
www.nytimes.com/2015/09/20/nyregion/the-science-behind-they-all-look-alike-to-me.html.

Taylor, Derrick Bryson. “For Black Men, Fear That Masks Will Invite Racial Profiling.” *The New York Times*, The New York Times, 14 Apr. 2020,
www.nytimes.com/2020/04/14/us/coronavirus-masks-racism-african-americans.html.

The Editors of Encyclopædia Britannica. “Camera Obscura.” *Encyclopædia Britannica*, Encyclopædia Britannica, Inc., 7 Feb. 2020,
www.britannica.com/technology/camera-obscura-photography.

United States, Congress, “Crime and Enforcement Activity in New York City .” *Crime and Enforcement Activity in New York City* , 2017.