

BIOPolitical

Does Biometrics Replicate The Worst Of Binary Systems of Gender,
Colonialism and Capitalism?



Nikolas Ryan
2023

Introduction

This essay aims to investigate Michel Foucault's theory on Biopower and apply it to biometrics. This research applies Foucault's theories to contemporary life by analysing the development and implementation of biometrics to improve understanding of their impact on Transgender people.

Biometrics is a technology that uses physical characteristics to identify individuals, such as facial features, fingerprints, or iris patterns. While biometrics is a more secure and efficient alternative to traditional identification methods such as passwords or identification cards, it has flaws. One major issue with these systems is the margin of error, which can result in many incorrect identifications, particularly for trans people. The main objective of this project is to analyse if biometrics replicate the worst of binary systems of gender, colonialism and Capitalism.

While technology is constantly transitioning and transforming, it is crucial to question the intention of our actions. Due to the classification system of biometrics, humans that do not align with the majority's perception of 'normal' are frequently misidentified, mistreated, or ignored the existence of anyone who deviates from said 'norm'. This essay will investigate ways to combat the systems responsible for these problems to genuinely understand why and how it is vital to challenge conformity.

The impetus for this endeavour stems from my own experience as a Transgender Person Of Colour (POC) and the pain and suffering I endured as a result of these biopolitical, binary systems. I am now eight years into my transition. Four years of that time consisted of a tortuous wait for an appointment with a clinical psychologist. I then had to undergo a consultation that lasted for hours to attain a prescription for Hormone Replacement Therapy (HRT). The questions for the consultation were incredibly invasive. Questions about my past

relationships, how many people had seen me naked, and what porn I had been seeing.

Through much fighting but much more compliance, I started HRT in August 2018.

Despite being on HRT legally changing my name and gender in June 2019, I am actively misgendered and deadnamed in letters and even on forms of identification, including my passport. Due to the exclusivity of these binary structures embedded in systems of power, I have found it incredibly difficult to exist in this world. It is a scary thought, especially considering the rapid growth of digital technologies; identity in the digital world is more important than ever.

Avi Marciano agrees that cyberspace is a good platform for transgender individuals to experiment and express their gender identity because it allows for anonymity that may not be available offline. Many transgender people hide their identity offline to avoid social sanctions and maintain a virtual identity, meaning "living" online is not new to them." In the online world, they can experiment and express their gender identity without fear of negative consequences. (2014, p. 282)

Marciano claims that we can consider transgender individuals as experts in the online world.

While people may utilise cyberspace to sustain and maintain their identity, the online realm can be life-saving for some trans users as they can create and validate their true identity.

"Ironically, the virtual world – where others make efforts to learn how to manage their identities – gives expression to the usually hidden transgender identity." (2014, p. 282)

He quotes Hegland & Nelson to suggest that the experience of being transgender in cyberspace may "infuse a sense of realness into the experience of something that is, at least according to strict social dictates, based on artifice and deception" (Marcino, 2014, p. 282)

The remainder of this essay will explore how humans are responsible for replicating binary systems within the digital world. Here we can see the benefit of such technologies, mainly on Trans lives. However, technology and humans are both susceptible to corruption.

The next chapter will examine the development of binary classification systems using the fundamental theories of Foucault and Butler. The second chapter will explore how these binary classification structures have evolved to become biopolitical systems of power.

Chapter three will use case studies to investigate biopolitical systems' replication in biometrics. The final chapter will investigate methods to combat these challenges.

Chapter 1: The Development of Binary

Classification Structures

Michel Foucault

This paper will explore Foucault's theories on Biopolitics to help deepen our understanding of conformity and classification over bodies. It will identify why these theories could apply to the disempowerment of trans people. To begin, we will investigate anatomo politics and Biopower to ground our understanding of Biopolitics.

Anatomo Politics

In *Security, Territory, Population*, Foucault refers to anatomo politics as the "politics of the human body" (Foucault, 1977 - 78, p. 243).

This power was created by repeatedly recognising certain types of 'proper' bodies.

In *The History Of Sexuality*, Foucault refers to anatomo politics as "an explosion of numerous and diverse techniques for achieving the subjugations of bodies and the control of populations". (Foucault, 1978 , p.140)

When doctors first operated on people to study their anatomy, they laid the groundwork for what it meant to be healthy. Doctors evaluated people's anatomy based on deviation from the "healthy norm." This classification system created a vast unintentional bias, favouring the majority and punishing minorities. However, instead of investigating and adjusting this imbalance, we are replicating these binary systems in systems of power.

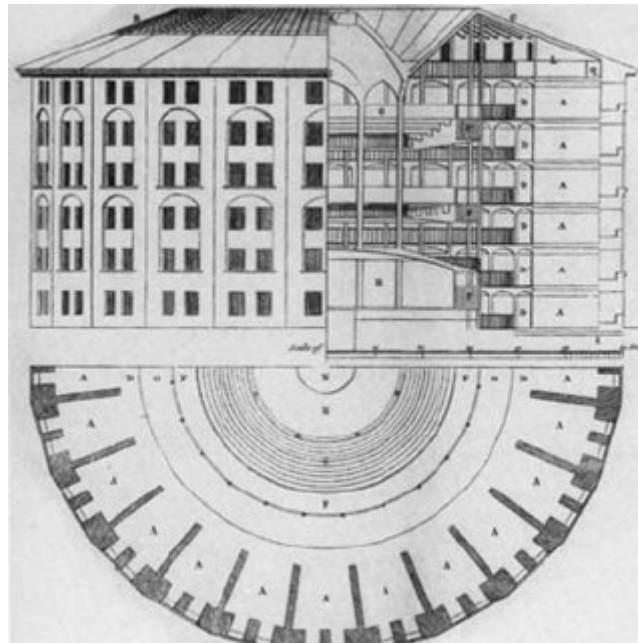
Biopower

A power system which came from anatomo politics is Biopower.

"By this, I mean a number of phenomena that seem to me to be quite significant, namely, the set of mechanisms through which the basic biological features of the human species became the object of a political strategy, of a general strategy of power, or, in other words, how, starting from the 18th century, modern Western societies took on board the fundamental biological fact that human beings are a species. This is what I have called Biopower." (Foucault, 1977-78, pg. 1.)

It is the administration and management of human life. It utilises restrictive, binary systems on the population and individual bodies. Biopower creates a type of power that targets the marginalised population. Biopower refers to the control of human bodies, whereas anatomo politics controls the individual.

Panopticon



(Img. 1: Panopticon Plans)

Foucault's *Discipline and Punish: The Birth of the Prison* introduces the Panopticon to enforce the established norms from anatomo politics.

In *The Panopticon Prison Theory*, Daniel Cole explains the origins of the Panopticon. Jeremy Bentham presented the Panopticon prison as a possible prison layout founded on the utilitarian principle, which states that activities are morally correct provided they maximise the overall enjoyment for all parties involved. The Panopticon jail is both economically and morally efficient in its design. It allows a few guards to observe many convicts. At the same time, the prisoners engage in lucrative labour that does not require funding from the public purse. The design also encourages accountability among convicts, which safeguards the convicts' lives and well-being, and guards may step in if necessary. (2022)

"It is an important mechanism, for it automatises and disindividualizes power. Power has its principle not so much in a person as in a certain concerted distribution of bodies, surfaces, lights, gazes; in an arrangement whose internal mechanisms produce the relation in which individuals are caught up. The ceremonies, the rituals, the marks by which the sovereign's surplus power was manifested are useless. There is a machinery that assures dissymmetry, disequilibrium, difference. Consequently, it does not matter who exercises power. Any individual, taken almost at random, can operate the machine: in the absence of the director, his family, his friends, his visitors, even his servants." (Foucault, 1977. p. 202)

The concept of the Panopticon will be vital when we investigate Techno-politics, Biopolitics and Capitalism in chapter 2 and biometric surveillance in chapter 3.

Biopolitics

Biopolitics studies how politics and legislation influence and manage human lives in a specific location. It is about how the government makes decisions depending on the qualities and characteristics of the people that live there. In other words, it is the process by which the government makes decisions regarding people's lives based on particular population features and attributes. Biopolitics aims "to ensure, sustain, and multiply life, to put this life in order." (Foucault, 1976, p. 138.)

Biopolitics is closely related to Capitalism. It refers to the exertion of political power over bodies and populations in a capitalist society and how Capitalism shapes our understanding of the self and our bodies.

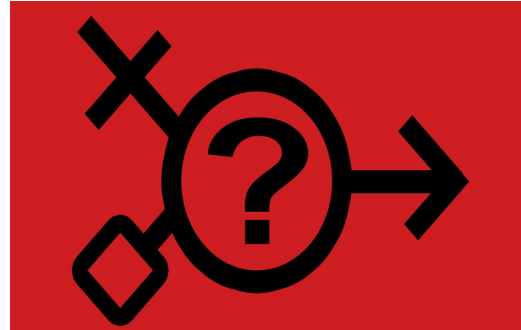
Colonialism can utilise Biopolitics to exert control over the colonised people through practices such as forced labour, forced relocation, and reproductive and health regulation. These techniques are frequently employed to maintain coloniser power and suppress colonised people's resistance.

Foucault's thoughts also hold in our digital realm. As we continue to the next section, we will explore how Biopolitics has affected the development of gender.

Judith Butler

Social Constructs of Gender

Examining *Judith Butler's Performative Acts and Gender Constitution: An Essay in Phenomenology and Feminist Theory* can provide a valuable starting point in the understanding of the categorisation of gender.



(Img. 2: Gender symbol)

She states:

"To be female is, according to that distinction, a facticity which has no meaning, but to be a woman is to have become a woman, to compel the body to conform to a historical idea of 'woman,' to induce the body to become a cultural sign, to materialise oneself in obedience to an historically delimited possibility, and to do this as a sustained and repeated corporeal project." (Butler, 1988, p. 519)

This quote explores the notion that "woman" is not a natural or inherent quality but a social construct imposed on humans. The remark asserts that while "being female" is merely a biological fact, "being a woman" entails acclimating to a particular historical and cultural ideal of what a woman ought to be. This process, continually improved upon and reinforced, comprises moulding one's body to fit cultural values. According to author Judith Butler, the societal creation of "woman" is a continuous and repetitive physical endeavour.

Butler shows that gender is not only a social construct but a by-product of anatomo-politics enforced through Biopower, Biopolitics and self-panopticism.

Gender Performativity

In her book *The Subjects of Sex/Gender/Desire*, Butler explains that Kate Bornstein takes this



idea further by claiming that gender does not exist as an objective natural thing; instead, it is "performative," meaning it is only real to the extent the individual performs it. She also claims:

"Because there is neither an 'essence' that gender expresses or externalises nor an objective ideal to which gender aspires; because gender is not a fact, the various acts of gender create the idea of gender, and without those acts, there would be no gender at all. Gender is, thus, a construction that regularly conceals its genesis." (Butler 1990, pg. 273).

(Img. 3: Marlene Dietrich in a suit)

The above quote shows that gender is not a fixed characteristic but instead is something that is continuously constructed and reinforced through societal norms and expectations. (Butler, 1990, pg. 278).

Butler refers to Simone de Beauvoir: "one is not born, but rather becomes a woman." (Butler, 1986, pg. 35) This echoes Butler's opinion that gender is a frequently hidden fabrication.

Understanding gender as a social construct rather than an innate or natural characteristic is crucial when evaluating the ethics of biopolitical systems. Biopolitical systems commonly categorise people according to attributes like gender, colour, and sexual orientation. However,

if the artificial creation of qualities is by society's norms and expectations rather than being fixed or natural, we must question the morality of basing political institutions on them. It also emphasises how important it is to challenge and question accepted norms and expectations to create a more just and equal society.

Next, we will investigate the replication of these binary classification structures in biopolitical systems.

Chapter 2: From Binary Structures of Classification to Biopolitical Systems of Power

Capitalism

We can see similarities when we compare Capitalism to anatomo-politics and Biopolitics in that success is determined by one's interests adhering to arbitrary criteria. When investigating Capitalism, a great starting point is Adam Smith, known as the "Father of Capitalism." His ideas helped to establish the capitalist economic system. He claims:

"It is not from the benevolence of the butcher, the brewer, or the baker that we expect our dinner, but from their regard to their own interest." (Smith, 1776)

This mode of thinking is exclusive and greedy. It aims to motivate people through the promise of personal gain. However, the individual's interests are limited to the binary, restrictive systems we have established. Furthermore, evaluating the potential negative implications of such a system is critical as to whom it impacts and who benefits from it. For individuals who do not fit into the majority's classification, are they deemed unworthy of profit and success?

The inextricable link between Capitalism and Biopolitics can allude to how we perceive ourselves and our bodies. Capitalist societies, for example, impact how we think about health and illness, how we perceive the relationship between our bodies and our minds, and how we understand the interaction between our bodies and the environment.

Cis-Coloniality

When specifically looking at the exclusion of trans people, Mariah Rafaela Silva uses the term Cis-coloniality.

Cis-coloniality describes a system of dehumanisation and oppression practised by the modern/colonial world towards individuals with non-conforming gender identities and physical characteristics that go against our established "norms". This system emerged from colonialism. Colonialism is the practice of a powerful nation actively controlling weaker nations and utilising its resources to further its own wealth and power. This exploitation has been maintained by various economic, scientific, technological, and visual mechanisms. It has resulted in the exploitation and marginalisation of particular populations, especially those racialised and gendered as "other." (2021)

Cis-coloniality has an identical categorisation and power system to Biopolitics, in which the "norm" is arbitrarily established and enforced. This prejudice specifically targets gender non-conforming people as deviants of the 'norm'. This system replicates the structure of colonialism as the cisgender community actively controls the trans community and utilises our resources to further their wealth and power.

Technopolitics

Silva elaborates further, stating that when thinking about the effects of biopolitical technologies on society, it may be essential to understand how technology might support and maintain oppressive institutions. Considering this may be especially important in the context of artificial intelligence, which, if not planned and executed responsibly and inclusively, has the potential to magnify and maintain current prejudices and inequities. This concept is known as techno-politics.

Cis-coloniality and techno-politics can contribute to the marginalisation and dehumanisation of certain groups, particularly those racialised and gendered as "other." (2021)

Rafaela highlights the importance of investigating oppressive technology. Acknowledging this is relevant when considering the impact of biopolitical technologies and artificial intelligence on marginalised communities and how these technologies may exploit or discriminate against certain groups. Artificial intelligence has the potential not only to sustain but also to exaggerate current biases and injustices. This potential is worrisome as Biopolitics aims to "ensure, sustain, and multiply life, to put this life in order." (Foucault, 1977-78).

As we explored in the previous chapter, Biopolitics is rooted in anatomo politics, which results in punishment for those who deviate from the norm. Artificial Intelligence allows us to automate biopolitical, binary classification systems in our digital realm. (2021)

Cis-coloniality, Capitalism, and techno-politics replicate the panopticon system by establishing a system of surveillance and control over marginalised groups such as cis-gendered and non-white people.

Chapter 3: Biometrics Replicates The Worst Of Binary Systems

Biometrics: Trans Empowerment

A common issue in the trans community is managing gender dysphoria. Transgender Equality Network Ireland, describe gender dysphoria as: "a term that used to describe the discomfort caused by an incongruence between one's true gender and their sex assigned at birth."

(Transgender Equality Network Ireland, 2021)

We hold in our pockets the capacity to perceive a representation of something that does not exist in the natural world. Thanks to biometric software and augmented reality, we can now construct ideal representations of ourselves and our surroundings in seconds.

"Many advanced Image Processing methods leverage Machine Learning Models like Deep Neural Networks to transform images on a variety of tasks, like applying artistic filters, tuning an image for optimal quality, or enhancing specific image details to maximise quality for computer vision tasks." (Aig, 2022)

These tools can empower Transgender people as it is an obvious way to alleviate Dysphoria.

Although this is a positive instance of the effect of biometrics, it does not rectify or even pacify the ethical issues arising. The remainder of this chapter will highlight these issues.



(Img. 4: Gender face filter)

Biometrics: Biopolitical Technologies

Michaël Føessel and Antoine Garapon examine various criticisms regarding biometric recognition technology's application in modern democracies. The authors believe biometrics is a biopolitical paradigm, a type of "biopolitical tattooing" that intrudes on people's privacy. Giorgio Agamben compares the biometric tracking system to a tagging procedure that creates a link between the reality of the concentration camps and modern democracies. (2007. p.5)

Føessel and Garapon also point out that biometrics effectively promotes a specific sense of individual and personal identity, which requires criticism should it become exclusive to others. The authors contend that biometrics prioritises reducing the body to computerised parameters over "ipse-identity" (selfhood). This priority may lead to a totalisation of the person, and their actions fall into the categories of "same" and "denial of change." The author also emphasises the risk of losing control over biometric data and the possibility of these data being shared with other states or private security organisations, posing privacy and individual freedom concerns. (Føessel & Garapon. 2007. p.6)

Biometrics works on a similar model to Michel Foucault's ideas on anatomo politics as there is recognition of certain types of 'proper bodies.' The system shares similarities to Biopower while exemplifying the automation of anatomo politics. This comparison begs the question of who is accountable for the activities of these autonomous systems. Like the Panopticon, it does not matter who operates the system as it is self-reliant. Furthermore, the training responsible for the functioning of these systems perpetuates and even amplifies biases in the data.

Biometrics: Trans Disempowerment

Now that we understand how biometrics is a biopolitical system, we can look deeper at how the development of these systems contributed to the marginalisation of gender non-conforming individuals.

Kate Crawford explains that despite the IBM team seeking to promote diversity in facial recognition data, their classification strategy exposed the politics behind their conception of diversity. People who did not fit these binary gender categories were eliminated and instead used binary categories, such as cranial orbit height and nose width, when discussing diversity. Fairness in facial recognition was equated to more excellent accuracy rates, and diversity was referred to as using a wider variety of faces to train the model. This strategy depoliticises variety and concentrates power on designers, who decide which differences are significant and how to categorise individuals. This assertion contradicts decades of research from writers such as Butler, arguing that race, gender, and identity are not biological categories but are best understood as social, political, and cultural constructs. (Crawford, 2021, pg. 132)

The implantation of identifying technical systems claims as truths observable from the face is one instance of what Browne describes as "digital epidermalization," or the imposition of race on the body. The author describes this as the exercise of power and claims that the disembodied gaze of surveillance devices "perform the work of alienating the subject by constructing a 'truth' about one's body and one's identity (or identities)". Here we are reminded of panopticism's efficiency and effect on Capitalism and Colonialism. These types of centralised manufacturers of identity, driven by the team's use of machine learning techniques, are the underlying problems with IBM's classification of diversity. Skin colour identification is made for no other reason than that it is technically feasible, not because it provides any racial or cultural insight. (Crawford, 2021, pg. 133)

While it is great to see companies want to improve, it is essential to question the intention behind the action. While on the surface, it may seem that the team at IBM wanted to make a positive impact, a possibility for its failure may derive from favouring function over inclusion. Inclusivity and diversity are integral topics in the Trans community and should be treated accordingly. In a world where we are so often excluded, people must be more vigilant to ensure they do not contribute to the alienation of Trans people.

IBM's negligence demonstrates that developers are replicating the binary classification we have seen in Biopolitics, cis-coloniality and Capitalism. In order to understand how these systems function in terms of gender, we will explore how the body is categorised in ImageNet.

"In ImageNet the category "humanbody" falls under the branch Natural Object → Body → HumanBody. Its subcategories include "male body," "person," "juvenile body," "adult body," and "female body." (The "adult body" category contains the subclasses "adultfemale body" and "adultmale body." There is an implicit assumption here that only "male" and "female" bodies are recognised as "natural." There is an ImageNet category for the term "Hermaphrodite," but it is situated within the branch Person → Sensualist → Bisexual alongside the categories "Pseudohermaphrodite" and "SwitchHitter." (Crawford, 2021, pg. 138)

"Bearing this in mind, we can recognise that this classification system is political. The choice to categorise gender in this manner is also "naturalising gender as a biological construct, which is binary, and transgender or gender nonbinary people are either nonexistent or placed under categories of sexuality." (Crawford, 2021, pg. 138)

Here, Crawford highlights similarities in techno-politics, Capitalism, and cis- coloniality. All systems adhere to arbitrary standards that do not accurately represent all people but instead conform to a specific body type. Enforced adherence to binary structures can invalidate some Trans people's identities.

She states that machine learning classifiers frequently reduce people to binary gender categories and label transgender people as "deviants" or invisible. According to Os Keyes'

analysis of automatic gender detection in facial recognition, about 95% of articles in the field treat gender as binary, with the majority characterising gender as physiologically fixed and immutable. While some may argue that this can be fixed by adding more categories, it ignores the more severe harm of classifying people according to their gender or ethnicity. (Crawford, 2021, pg. 138-139)

This type of categorisation might have been more helpful in previous years, but we have identified the problems with this in the physical world when we consider cis-coloniality. Instead of focusing on protecting users, particularly marginalised ones in the digital world, we are basing systems on people's ability to adhere to gender norms. Again, this further solidifies that techno-politics is a base system for machine learning which disempowers trans communities as a whole as well as its members.

Biometric Security

Paisley Currah and Tara Mulqueen wrote an essay investigating the relationship between a person's identification and security, particularly for airport security inspections. The essay argues that during identity verification processes, gender is frequently assumed and not completely taken into account. It discusses the potential for confusion when a person's gender on their identification documents does not match how they portray themselves or how security technology recognises them. (Currah & Mulqueen, 2011)

The authors elaborate on the inconsistent standards for gender reassignment on identity documents, particularly in the United States. In certain states, changing a person's gender designation on their paperwork, certain authorities demand that Trans people must have completed all gender affirmation surgeries. Additionally, there is a lack of consistency across

the regulations of various organisations and jurisdictions, with some refusing to alter the gender marker on a person's documentation under any circumstances. For transgender people, who may encounter conflicting or contradicting official identities, this can cause problems and uncertainty, reinforcing my initial concerns about how biopolitical systems disempower Trans individuals. (Currah & Mulqueen, 2011, pg. 561)

The authors reference Keisling et al., highlighting the complications that can arise due to the exclusivity of gender categorisation for trans people. These difficulties include airport security screenings, resulting in prejudice and harassment of passengers. There have been incidents where transgender people were held and subjected to intrusive questioning and pat-downs because their bodies did not match TSA's perceptions. This refusal to acknowledge Trans bodies can not only cause intense Dysphoria for the individual, but it also has the potential to weaponise the bodies of Trans people.

Bomb appraisal teams receive occasional calls to assess Transgender people as potential hazards. To help resolve these issues quicker, the Trans community urges their members to carry a letter from a doctor confirming their transgender identity. (Currah & Mulqueen, 2011, pg. 564-565)

While this solution is a step in the correct direction, it is not feasible long-term as it resolves only a fraction of the problem. There is also no guarantee that it would protect a Trans person from discrimination or Dysphoria.

There are striking similarities when we compare Foucault's thoughts on the Panopticon to biometric security. It does not matter who operates either of these systems, as anyone can do

it. Rather than being possessed by a single individual, power is digitised, delegating the role of governance to a mechanism that generates imbalances and differences.

Weaponisation of Trans Bodies

A journalist for VentureBeat, Ashleigh Hallowell, stated

"A report from the Biometrics Institute found that 'more than 90% of industry professionals agreed that biometrics will be the key enabler for anchoring digital identity and that there will continue to be significant growth in mobile remote identity verification systems and remote onboarding technology.'" (2022)

Several years ago, a study team at the University of North Carolina, Wilmington, under the direction of professor Karl Ricanek, conducted "facial recognition research using transition videos" uploaded to YouTube by transgender people for community support and education. A claim that hormone replacement therapy treatments (HRT) might be utilised illicitly by criminals and terrorists to avoid detection via monitoring systems motivated Ricanek and his colleagues to perform the investigation. (Hallowell, 2022)

Hallowell and Os Keyes, a PhD candidate at the University of Washington's department of human-centred design and engineering, who researches data ethics, medical A.I., facial recognition, gender, and sexuality, disagree with Ricanek's explanation. Keyes stated that: "This idea is like the equivalent of saying, 'What if people tried to defeat detection by evading a height detector? What if they did it by cutting their own legs off?' 'To imply you would do this on a whim is to drastically misunderstand things.'" (2022)

It is false and ludicrous to suggest that criminals may obtain this life-saving treatment as a means of escaping justice. Although Ricanek's statement may have been more directed at cisgender individuals than at transgender people, it is trans communities that will ultimately suffer as a result of such accusations. It is horrifically transphobic even to suggest as it weaponises the bodies of Trans people.

Capitalisation of Trans People

Fergal O'Dwyer interviewed Nim Ralph in an article from the third issue of the New Economics Zine, entitled *Why Trans Liberation Is A Class Issue*. When asked if we could consider trans liberation as "a class issue in the sense that capitalism has shaped our understanding of gender." (2021)

Ralph stated that gender was employed as a form of social classification and control by European colonisers in colonisation. Beginning at the end of the 18th century, as capitalism developed in Northern Europe, industrial production of items such as iron and textiles required sections of the workforce to do the labour and sections of the workforce to care for those labourers and children who would grow up to become labourers. Masculinity and femininity were incorporated as a binary into the economy, with one-half of the workforce (women) conditioned to undertake unpaid care and household duties. At the same time, the other half (men) were assigned labour and manufacturing jobs. The economy was not 'naturally' split by gender – that was the objective. Gender did not govern our positions in the workplace because the division of labour by sex/gender defined our social ties. Gender did not dictate our positions in the workforce since the division of labour by sex/gender defined our social relationships; instead, our responsibilities defined and established our gender—trans people disrupted gendered social interactions by not fitting into these categories. As a result, the capitalist class judged trans people as unfit, which usually led to

institutionalisation. This decision left little choice but to remain secluded, hidden, unemployed, or work in the informal sector.(O'Dwyer & Ralph, 2021)

Capitalism, being a profit-driven economic system based on individual self-interest, has the potential to commodify and exploit trans people's bodies and identities. Businesses may use binary gender norms in their products and services, excluding trans people and perpetuating the idea that only two genders exist. Companies may use transgender people as a marketing tool to appeal to a specific demographic without regard for the individuals' well-being or rights.

The following example relates to Capitalism because it highlights the potential negative implications of biometric technology used in a capitalist context. The dating app, Giggle analyses users' facial skeletons to determine whether they are male or female. The app's use of biometric technology and data harvesting has drawn criticism. The technology has been reprimanded for its blatant Transphobia because it is exclusionary of Transgender women. Zoe Schiffer reports that the company states on its website that "[G]iggle is for all girls" before adding, "Due to the gender-verification software that giggle uses, trans-girls will experience trouble with being verified." Schiffer describes this hypocrisy as "the stuff of a dystopian novel". (Schiffer, 2020)

The app's privacy policy also permits it to gather and share personal data with other sources like advertisers, chat room providers, and facial recognition service providers. The policy further condones data gathering such as private health information, criminal histories, and "sexual habits or sex lives" of individuals. (Schiffer, 2020)

We must question why such companies would need this information. We must question the intent of gathering such sensitive information and be cautious of the potential for data misuse and abuse.

However, the most worrisome aspect of this discourse is that it stemmed from the Queer community. As a marginalised group, we understand oppression and privilege more deeply. As certain groups become more accepted in society, we must ensure that privilege does not prevent us from being inclusive. We must remember that equality and respect are not reserved for certain types of people but should be offered instinctively within our communities. This exclusivity shows the long-term effects of Panoptic and capitalist thinking on a community.

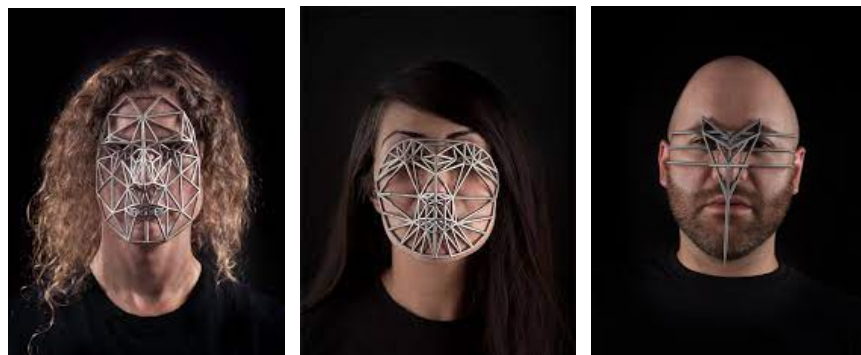
Chapter 4: "Failure" Is The Way Forward

Zach Blas

Zach Blas is an artist, filmmaker, and writer whose work investigates the materiality of digital technology and the ideologies and imaginaries underpinning Artificial Intelligence, biometric recognition, predictive policing, airport security, the internet, and biological warfare. Immersive environments that imagine a new psychedelic age powered by Artificial Intelligence, nootropics, and tech culture, a sex dungeon-cum-detention centre that recasts security and surveillance through BDSM, a film installation that follows author Ayn Rand on an acid trip in a dystopian internet future, a four-channel video installation and collaboration that resurrects Microsoft AI Tay to consider the gendered politics of pattern recognition and machine learning. (Blas, 2022)



(Img. 5: Facial Weaponization Suite 2012-14)



(Img. 6: Zach Blas' Face Cages 2014-16)

Queer Failure

Zach Blas discusses the impact of biometrics on the Queer community in his essay "Escaping the Face: Biometric Facial Recognition and the Facial Weaponization Suite". In the chapter entitled Biometrics and Failure, he discusses Jack Halberstam's concept of "queer failure" to fight the oppressive power of biometric technology and the state's attempts to control and regulate identity.

The expression "the queer art of failure" refers to embracing and viewing failure as a means of discovering new possibilities and different ways of living, loving, making art, and being. Instead of being viewed as a negative conclusion, we can view failure as a means of discovering new paths and goals. It also implies that this approach may be regarded as unconventional or "queer" because it departs from the standard view of failure as something to be avoided. (Blas, 2013)

Queer Technologies

Zach Blas spoke about his Queer Technologies project in an interview with Jacob Gaboury for Rhizome. He explained that it began in 2007 to create technologies that would offer alternatives to typical technological consumables and offer a critique of mainstream technological developments while also hinting at queer utopian possibilities. He guides this project on the premise that there is no such thing as a purely technological solution to a political problem. That technology is, first and foremost, social.

There are various components to the project: transCoder, a Queer Programming Anti-Language that can think through the politics and cultures of programming languages and imagine new things that can be forged, communicated, and made through such a language;

ENgenderingGenderChangers, a series of gender adaptors that went beyond male and female, experimenting with pin and hole configurations as well as various I.T. stereotypes; Gay Bombs, a technical manual that serves as a manifesto of sorts, a guide on how and why to use Queer Technologies; and the Disingenuous Bar, a performative platform where people can interact with Queer Technologies. The project is a critical branding project that explores commercial queerness and technology consumables to exist in various contexts without being recognised as Queer. (Gaboury, 2010)



(Img. 7: From left to right: Copies of transCoder, Samples of ENgenderingGenderChangers, The Disingenuous Bar at the Broad Art Center, UCLA May 2008 from his Queer Technologies project)

Conclusion

Michel Foucault's theory of Biopower and its impact on biometrics is an important and timely topic to consider in modern society, especially given the rapid growth of digital technologies and their role in shaping identity. The personal experiences shared in this essay demonstrate how biopolitical systems can be harmful and exclusionary for transgender people and how these systems can be reinforced by using biometric technology.

Gender classification in biometric systems is also problematic because it reduces people to binary categories and labels transgender people as "deviants" or invisible. According to an Os Keyes study, 95% of facial recognition software's automatic gender detection systems classified transgender women as men, while 70% of systems classified transgender men as women.

This classification not only demonstrates these systems' limitations in accurately recognising and respecting the diversity of gender identities but also their potential to reinforce harmful stereotypes and discrimination.

Aside from concerns about accuracy and inclusion, there is also concern about using biometrics for surveillance and control. According to Jacqueline Nassy Brown's analysis of digital epidermalization, the disembodied gaze of surveillance devices can "perform the work of alienating the subject by constructing a 'truth' about one's body and one's identity (or identities)." Through digital epidermalization, biometric technology imposes identities and controls persons' movements and activities, particularly when necessary for specific services.

Adam Smith's thoughts regarding Capitalism, as outlined in his book "An Inquiry into the Nature and Causes of the Wealth of Nations," have substantially impacted the development of

capitalist economic systems. A primary assumption of capitalism ideology has been Smith's conviction that individuals pursuing their self-interest would lead to economic growth and prosperity for society. However, it is vital to critically assess such systems' assumptions, whom they benefit and how they affect people outside the majority's categorisation. Furthermore, Capitalism has significantly impacted how gender is perceived and employed as a social classification and control method. The division of labour by gender was integrated into the economy as Capitalism emerged in Northern Europe, altering our understanding of gender and leading to the marginalisation of trans individuals. Trans liberation is a class issue due to its association with Capitalism, which has influenced our idea of gender.

The development of Giggle highlights the potential for biometric technology and artificial intelligence (A.I.) to reinforce biopolitical, binary systems that discriminate against marginalised groups, such as the trans community. These incidents serve as a reminder of the importance of diversity and inclusion in technology development and application and the importance of considering the potential ethical ramifications of such systems. Those in positions of power and influence must act morally and justly, considering the impact of their actions on vulnerable or at-risk groups.

We must remain vigilant and actively work to create a more inclusive and equitable society that values and respects all individuals' rights and freedoms, regardless of their identity or characteristics. It is also critical to carefully consider the intentions and potential consequences of harvesting and utilising sensitive personal information and hold companies accountable for data misuse or abuse.

The trans community suffers various hurdles and obstacles in the digital realm, including censorship, safety, and accessibility. Giggle's biometric technology and data collection techniques foster Transphobia while raising privacy and data exploitation issues.

Furthermore, the lack of online safe places, particularly for trans people in authoritarian nations, and enforcing tight real-name restrictions undoubtedly threaten their internet liberties.

The use of biometrics in security systems has the potential to harm transgender people by creating uncertainty and discrimination during identification verification processes. The weaponisation of transgender bodies for security purposes perpetuates the transgender community's disempowerment and seeks to marginalise them further. There is a need to question the establishment of these biopolitical systems and work toward inclusive and privacy-friendly technologies that consider transgender people's particular demands and experiences.

Zach Blas highlights the impact of biometrics on the queer community by exposing its capacity to control and regulate identity. Blas references Jack Halberstam's concept of "queer failure," which allows trans people to reject societal norms and the state's attempts to control and measure identity through biometrics. Blas underscores the paradox of recognition, in which the failure to be identified by the state and biometric technology can lead to violence but also allows Queer people to avoid normative legibility and official acknowledgement. Overall, Blas highlights the disempowerment of trans persons through biometrics and how Queer people can resist this oppression through queer failure and queer technologies.

In conclusion, biometrics operates on a categorisation system similar to Michel Foucault's concept of anatomo politics, which emphasises the recognition of specific "proper bodies" and normalises others, exacerbating the ethical concerns of biometrics. The system also shares similarities with cis-colonality, technopolitics and Capitalism. This adherence to

binary systems can lead to replicating biased systems in biometrics as specific physical characteristics and exclude those that do not fit into predetermined categories. This approach not only contradicts decades of research that claims race, gender, and identity are social, political, and cultural constructs, but it also strengthens artists' power to decide which differences are significant and how to categorise individuals. As such, we can view biometrics as a biopolitical technology that works by exercising power and constructing "truths" about bodies and identities. In other words, biometrics replicates the worst of binary systems of gender, colonialism and Capitalism.

Bibliography

Aig, E. (2022) *What Image Processing Techniques Are Actually Used in the ML Industry?* MLOps Blog. Last accessed: 19/01/2023. Available at: <https://neptune.ai/blog/what-image-processing-techniques-are-actually-used-in-the-ml-industry#:~:text=Many%20%20advanced%20Image%20Processing%20%20methods,quality%20for%20computer%20vision%20tasks>

Berthélémy, C. (2019) *The digital rights of LGBTQ+ people: When technology reinforces societal oppressions*. Last accessed: 19/01/2023. Available at: <https://edri.org/our-work/the-digital-rights-lgbtq-technology-reinforces-societal-oppressions/>

Blas, Z. (2013) *Escaping the Face: Biometric Facial Recognition and the Facial Weaponization Suite*. Media-N, CAA Conference Edition, Volume 9, Number 2, ed. Pat Badani.

Cole, D. (2022) *The Panopticon Prison Theory*. Last accessed: 19/01/2023. Available at: <https://study.com/learn/lesson/panopticon.html>

Crawford, K. (2021) *Atlas of AI: Power, Politics, and the Planetary Costs of Artificial Intelligence*. New Haven, Conn.: Yale University Press, 2021. p.132-139

Curran, P. & Mulqueen, T. (2011) *Securitizing Gender: Identity, Biometrics, and Transgender Bodies at the Airport* p. 561-565. Last accessed: 19/01/2023. Available at: https://www.researchgate.net/publication/228146031_Securitizing_Gender_Identity_Biometrics_and_Transgender_Bodies_at_the_Airport

Foessel M. & Garapon, A. (2007) *Biometrics And New Forms Of Identity* English translation by Ros Schwartz, p. 5-6. Last accessed: 28/01/2023. Available at: <https://www.diplomatie.gouv.fr/IMG/pdf/0801-foessel-garapon-ANG.pdf>

Foucault, M. (1977-1978) *Security, Territory, Population: Lectures at the Collège de France*. Basingstoke: Palgrave. p. 1, 243.

Foucault, M. (1977) *Discipline and Punish: The Birth of the Prison: Panopticism*, edited by Alan Sheridan, New York: Vintage Books, p. 202

Foucault, M. (1976) *The history of sexuality: Volume 1, an introduction*. Translated from the French by Robert Hurley. New York, NY: Vintage Books. p.138, 140

Hallowell, A. (2022) VentureBeat. How a flawed biometrics research project singled out LGBTQ+ individuals. Last accessed: 19/01/2023. Available at: <https://venturebeat.com/ai/how-a-flawed-biometrics-research-project-exposed-ai-ethical-issues-singled-out-lgbtq-individuals/>

Marciano, A. (2014) Living the VirtuReal: Negotiating Transgender Identity in Cyberspace, *Journal of Computer-Mediated Communication*, Volume 19, Issue 4, pgs. 824–838. Last accessed: 19/01/2023. Available at: <https://doi.org/10.1111/jcc4.1208>

Transgender Equality Network Ireland. (2021) Last accessed: 29/01/2023. Available at: <https://teni.ie/resources/trans-terms/>

O'Dwyer, F & Ralph, N. (2021) *Why Trans Liberation Is A Class Issue*.

Last accessed: 29/01/2023. Available at:

<https://neweconomics.org/2021/08/why-trans-liberation-is-a-class-issue>

Schiffer, Z. (2020) *The Verge: This girls-only app uses A.I. to screen a user's gender — what could go wrong?*

Available at:

<https://www.theverge.com/2020/2/7/21128236/gender-app-giggle-women-ai-screen-trans-social>

Silva, M.R , Navigating screens, SUR 31 (2021), Last accessed: 19/01/2023. Available at: <https://sur.conectas.org/en/navigating-screens/>

Smith, A. (1776) *An Inquiry into the Nature and Causes of the Wealth of Nations*, vol.1, ch.2.

Image Credits

Cover Img.: *What Is Your Deadname* (2023) ASCII Self Portrait by Ridiculous Nikolas (Nikolas Ryan)

Img. 2: *Elevation*, section and plan of Jeremy Bentham's Panopticon penitentiary, drawn by Willey Reveley, 1791 Source: J.Bentham, Panopticon, Works, Vol. IV, n°17

Img. 3: *Untitled*, Gender Symbol by Philosphytube

Img. 4: *Untitled*, Marlene Dietrich In Suit
(<https://www.etsy.com/listing/839255120/marlene-dietrich-1930s-adjusting-her-bow>)

Img. 5: *Facial Weaponization Suite* (2012-14) Masks by Zach Blas.
(<https://zachblas.info/works/facial-weaponization-suite/>)

Img.6: *Facial Weaponization Suite* (2012-14) Face Cages by Zach Blas.
(<https://zachblas.info/works/face-cages>)

Img. 7: *Queer Technologies* (2010) by Zach Blas
(<https://rhizome.org/editorial/2010/aug/18/interview-with-zach-blas/>)