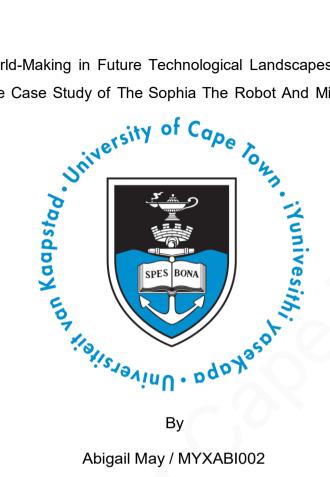Colonial World-Making in Future Technological Landscapes: A Qualitative Comparative Case Study of The Sophia The Robot And Miquela Projects

By

Abigail May / MYXABI002

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Dr Gavaza Maluleke

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COMPULSORY DECLARATION

This work has not been previously submitted in whole, or in part, for the award of any degree. It is my own work. Each significant contribution to, and quotation in, this dissertation from the work, or works, of other people has been attributed, and has been cited and referenced.

Signature: Signed by candidate   Date: 14 February 2022

Abstract

Future technologies are being produced by private actors in projects promising radical societal changes. Little attention is given to the intention of these private actors. This increases the risk of missing the ways in which private political and economic interests shape future technological imagining. From Jeff Bezos floating space coloniesto Mark Zuckerberg's reality bending 'metaverse', private companies envision futures that will be far better than present society. However, factors that caused the need for societal transformation are being reworked into the imaginings of future landscapes promising. Through a comparative case study analysis of the robot projects of Sophia the Robot and Miquela Sousa, the argument presented in this research study is thatthe improved and inspiring future landscapes each robot project presents cannot be achieved. This is because the ideological framing of each project replicates the logic of modernity, which functions on structures of oppression. By applying colonial and modern examples from the past and present, this study illustrates the ways in which systems of oppression – such as white supremacy and enslavement- are reproduced in the imaginings of the future in private actors' technological projects as well as the technologies itself.

Acknowledgements

Content

Chapter 1: Introduction

At the 2018 George W. Bush Centre Leadership Forum, Amazon Founder and multibillionaire Jeff Bezos made a dig at fellow multibillionaire Elon Musk. Musk has been a longstanding proponent of the need for humans to colonize Mars to ensure their future survival. His space-travel company SpaceX is forging towards achieving this goal by the year 2050.[1] Bezos labelled the idea of building a colony on another planet as 'unmotivating'.[2] He explained that despite sending thousands of robots out to other planets, results show planet earth remains humanity's best option.[3]

Bezos also owns a space-rocket company called Blue Origin. However, he does not associate humanity's future survival to any singular planet. Rather, he foresees future human space colonization occurring throughout *the entirety* of the solar system. For him this would be an incredible outcome for future generations.[4] Bezos envisions that in this future the earth would act as a residential space, housing universities and parks. While the human colonies floating in outer space would house mega industrial factories, working to extract resources, such as the ice water located on the moon.[5] It is this vision that Blue Origin seeks to achieve – where floating human space colonies have access to the solar system's unlimited energy and mineral resources.

Bezos and Musk form part of a commercially driven space-race along with other multibillionaires such as Virgin Active's Richard Branson.[6] The framing of these space travel projects see the use of advanced technologies as the means through which to save humanity from a growing inhabitable earth and propel the species into a better future. Bezos believes issues such as global hunger, homelessness and the earth's declining resources could be mitigated through the advancement of space-travel and emerging technologies like artificial intelligence. He claims that he is using the giant 'lottery ticket' of Amazon to be able to fulfil these goals.[7]

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[1] Mike Brown (2019), 'Blue Origin's Jeff Bezos Details His Radical Vision for Colonies in Space', Inverse Article, URL: https://www.inverse.com/article/55709-blue-origin-s-jeff-bezos-details-his-radical-vision-for-colonies-in-space

[2] Bezos outlined that there is a common idea that all our eggs lie in this one basket called planet earth and the only way to save the human species is to find another planet. See: George Bush Center (2018), 'Bush Center Leadership Forum, Jeff Bezos, C-Span Forum Video, URL: https://www.c-span.org/video/?443954-1/amazon-ceo-jeff-bezos-discusses-companys-future#

[3] Aging Reversed (2018|2019), 'Jeff Bezos- Biotech, Space and A.I.', Youtube Video Clip, URL: https://youtu.be/-drbm-DYIF4, mins 2:30-7:58.

[4] Aging Reversed (2018|2019), 'Jeff Bezos- Biotech, Space and A.I.', Youtube Video Clip, URL: https://youtu.be/-drbm-DYIF4, mins 2:30-7:58.

[5] Tech Insider (2019), 'Watch Jeff Bezos Reveal Blue Origin's Detailed Plan for Colonizing Space', YouTube, URL: https://youtu.be/Ge5Q3EBQ1tc

[6] Mike Brown (2019), 'Blue Origin's Jeff Bezos Details His Radical Vision for Colonies in Space', Inverse Article, URL: https://www.inverse.com/article/55709-blue-origin-s-jeff-bezos-details-his-radical-vision-for-colonies-in-space

[7] George Bush Center (2018), 'Bush Center Leadership Forum, Jeff Bezos, C-Span Forum Video, URL: https://www.c-span.org/video/?443954-1/amazon-ceo-jeff-bezos-discusses-companys-future#

Yet, behind the awe-inspiring vision of luxury space floating colonies, is an indication of what the actual outcome of this future may be. Bezos space-travel plans intend to replicate industrial factory labour and extensive resource extraction. Both of which have been catalysts for the dire social and climate issues the earth currently faces. Which brings into question, who shall be working in these future space colony factories? And at what cost? Shall, it be at the same low wage rates and dangerous working conditions recent Amazon employees have been striking against?[8] In reality, tech-billionaires' visions of transformative futures are re-imagined structures of the past.

Advanced technological projects promise future spaces that will ensure humanity's progress towards an improved condition. Yet elements that are root causes of the failings of present society are repeated in the framing of these future-orientated ventures. For instance, if the extensive natural resource extraction by factory corporations is an influential reason for the earth's natural resource depletion, why replicate a similar system in outer space? The answer presented here is that the aim is to preserve old-aged capitalist economic interests more so than the morality of what may be the right thing to do for the human species.

Ideologies of the future and the emerging technologies that will shape it are essential to contemporary politics. The unprecedented global threat of the Covid-19 pandemic saw the increased use of computer and artificial intelligent technologies into our everyday lives. The near complete conversion of virtual and physical reality these technologies evoked was largely accepted without question over what it may mean for present societal conditions and its future. Even without the pandemic in mind, much of the writings regarding the potential impact of future technologies are centred on the reaction it may cause for consumers and communities. Little attention is given to how the creators of the technology intend it to be used and understood.

Though there is research garnered towards the political and economic consequences such future technologies will have on publics and governance. There is not much discussion regarding the potential political and economic implications of the interests of private actors. This omission is glaring as the majority of future technologies are being developed by private companies. The research presented in this study focuses on this omitted aspect. The aim is to interrogate the intended purpose of the technologies created by companies by analysing two robot case studies. Robots, particularly human-like robots, are a technology that simultaneously re-presents the ideals of the future modern societies strive towards and are symbolic of the oppressive structures of hierarchies they reinforce. This makes it a technology that allows for the exploration of the ideological discrepancies in the future-orientated projects this study seeks to question.

The two robot case studies analysed here are Sophia the Robot and Miquela Sousa. Specifically, the research explores the intentions of the private actors creating these robots and the ideologies that drie their projects. The argument presented here is that despite both projects

[8] Kate Gibson (2021), 'Amazon workers in Chicago stage walkouts to demand better pay and working conditions', CBS News, URL: https://www.cbsnews.com/news/amazon-workers-walkout-pay-working-conditions/

claiming to strive towards building more tolerant and better futures for humanity, this cannot be achieved. The 'better' futures each project conceives is unattainable because the ideological framing of each project mirrors the logic of modernity which functions on structures of oppression. Therefore, it is in this way that the imagined 'better' futures these two robot projects present cannot be fully realised as it (re)-produces patterns of past and present oppressive structures.

Moreover, both project's imaginings of improved and inspiring futures of human survival hide the economic intentions of each robot's respective creators. From this, important socio-political and economic implications may emerge about future landscapes that are being heralded by private actors. By directing the focus in this light, we can begin to recognise the potential risks these technological projects may have in repeating systems of oppression in future contexts. Where the future landscapes within the projects should rather be understood as a resource whose value may be extracted for political and economic purposes.

By exploring these robot projects through notions of progress, coloniality, commodification of the 'other, and the use of female imagery to evoke care, this study seeks to illustrate the ways in which these two technological projects bring colonial logic and modernity into their constructions of the future. In doing so, the robot projects and the futures they strive towards hold the risk of replicating systems of oppression such as white supremacy and racism. Applying examples that are situated in the past and present to substantiate how modernity is replicated in these two cases, the aim is to take a more critical position towards private actors promising better futures. From this it is hoped that the potential political and economic interests within these ventures are highlighted and the risks they may pose illustrated.

<u>Conceptual (Re)-Framing of Artificial Intelligence and Robotics.</u>

If we return to the Bezos example, he mentioned the use of robots and artificial intelligence systems in the pursuit of human space-travel. Planetary physicist, Dr Philip Metzger and his colleagues agree with Bezos that the solar system's resources is the key towards humanity's future survival.[9] However, he claims for humanity to successfully become spacefaring, autonomous robot and artificial intelligent industry must be established in space.[10] The notion of artificial intelligence and robots aiding humanity towards its future progression is a common theme within future-orientated projects. But what are these two concepts and how do they reflect modernistic ideals?

There are a variety of ways in which artificial intelligence (A.I.) can be defined. An older definition is that artificial intelligence is the study of how to make computers do things, where presently people are better at.[11] A more comprehensive definition is that A.I is the ability of a machine to perform cognitive tasks that are associated with the human mind. This includes

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[9] Philip T. Metzger, Anthony Muscatello, Robert P. Mueller, and James Mantovani (2013), 'Affordable, rapid bootstrapping of the space industry and solar system civilization', *Journal of Aerospace Engineering*, vol 26, no. 1, pp 18-29.

[10] NBS News (2019), 'Jeff Bezos' Vision For The Future: Humanity In The Stars | Mach | NBC News', YouTube, URL: https://youtu.be/yD9kIS1gJZk

[11] Elaine Rich (1983), 'Artificial Intelligence', New York: McGraw-Hill.

possibilities for perception, the ability to argue, learn independently and find solutions to problems independently.[12]

Ultimately, a crucial goal for A.I. is the mechanical (re)-production of human intelligence, where the A.I. machine may possibly evolve to exceed that intelligence beyond human limits.[13] There are three types of A.I. The first is artificial narrow intelligence (A.N.I), commonly referred to as narrow or weak AI. It is only this type of A.I that we have been able to successfully realize so far. Narrow A.I is designed to be goal-oriented and perform singular tasks - i.e., facial recognition, searching the internet or self-driving cars - and is very intelligent at completing the specific task it is programmed to do.[14] Narrow A.I does not replicate human intelligence rather it simulates human behaviour. Then there is artificial general intelligence (A.G.I) or strong A.I which is the concept of a machine with general intelligence that mimics human intelligence and behaviours.[15] A.G.I can think, understand, and act in a way that is indistinguishable from that of a human in any given situation.[16]

This type of A.I does not yet exist. If scientists and researchers are to succeed in creating it, they must discover how to make a machine hold cognitive ability.[17] Finally, artificial superintelligence (A.S.I) is highly hypothetical A.I where machines become self-aware and surpass the capacity of human intelligence and ability. It is this type of A.I that has often been the subject of science fiction films and novels whereby machines hold human-perceptible emotion and intelligence.[18] All of the above A.I. are founded on the logic that it shall progress beyond human understanding and bring forth a better condition for humanity. But what is fundamental to such developments is that the A.I. must first be capable of replicating human thought, in whatever the limitations of how that is defined may be. Here, we see how replicating

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[12] Ralf T.Kreutzer and Marie Sirrenberg (2020), 'What Is Artificial Intelligence and How to Exploit It', In *Understanding Artificial Intelligence*, Springer, Cham, pp. 1-4.

[13] Ralf T.Kreutzer and Marie Sirrenberg (2020), 'What Is Artificial Intelligence and How to Exploit It', In *Understanding Artificial Intelligence*, Springer, Cham, pp. 5-20.

[14] Eban Escott (2017), 'What are the 3 types of AI? A guide to narrow, general, and super artificial intelligence', *CodeBots*, URL: https://codebots.com/artificial-intelligence/the-3-types-of-ai-is-the-third-even-possible

[15] Recent technological developments have allowed for A.I. to replicate the neural network system of the human brain. Computer scientists and software engineers attempt to recreate linking neurons in a parallel fashion, which allows for complex non-linear dependent initial information to be mapped out. Therefore, a neural network in A.I. is a hardware and software system whose structure is oriented towards the human brain. See: Ralf T.Kreutzer and Marie Sirrenberg (2020), 'What Is Artificial Intelligence and How to Exploit It', In *Understanding Artificial Intelligence*, Springer, Cham, p 5.

[16] Eban Escott (2017), 'What are the 3 types of AI? A guide to narrow, general, and super artificial intelligence', *CodeBots*, URL: https://codebots.com/artificial-intelligence/the-3-types-of-ai-is-the-third-even-possible

[17] A.I. is now capable of using machine learning. Which is a process that involves the A.I. attempting to develop and learn independently to achieve better results based on the experienced gained from the initial algorithms placed into its system. An algorithm is a programmed statement that processes input data in a predefined form and outputs results based on it. Machine learning uses very special algorithms—so-called self-adaptive algorithms. They allow the machines to learn independently without programmers having to intervene in the ongoing. These initial algorithms represent the foundation for new algorithms. If the new algorithms are proved more meaningful, during the learning process, then the 'machine', continues to work with the new algorithms independently, without any input. See: Ralf T.Kreutzer and Marie Sirrenberg (2020), 'What Is Artificial Intelligence and How to Exploit It', In *Understanding Artificial Intelligence*, Springer, Cham, pp. 5-8.

[18] Eban Escott (2017), 'What are the 3 types of AI? A guide to narrow, general, and super artificial intelligence', *CodeBots*, URL: https://codebots.com/artificial-intelligence/the-3-types-of-ai-is-the-third-even-possible

human experience within a technological form is seen as crucial to how A.I. can aid biological humans. Yet again this exemplifies how future technologies are framed through the lens of repetition in a different form.

As advancements of A.I is continually pursued the ways in which this new consciousness should be embodied is constantly questioned. From mechanical machines to computers and laptops, A.I. come in many shapes. Yet, it is in its possibility to replicate the human form that appears to most fascinate researchers. This reinforces the idea that the technology must embody human experience for it to be of ultimate use. The most frequent area of research taking such stance is robotics. Robotics is a subset field that incorporates the use of A.I. in the creation of its technology. The field of robotics is interdisciplinary in its scope. It applies knowledge from computer science, mechanical engineering, biology, and psychology to name a few.[19] A robot is often described as technical equipment, (a machine) that is used by humans to perform work or other tasks.[20] It is a subset field which focuses on how this new kind of knowing (A.I.) will be embodied. Once it is embodied it is made visible. It becomes tangible and can interact with material reality.

Throughout the historical development of robots, the technology became more sophisticated as clarity on the ways in which it could be developed increased. However, by the late 1980s to 1990s the common belief was that the deployment of robots and similar technology in workspaces would be slow- providing more opportunity to consider the possible effects of applying robots in social environments like factories.[21] Yet, over 60 years since the first robots were produced in the 1960s the capabilities of these technologies have multiplied. With the dawn of machine learning and deep learning- a remarkable shift has occurred.[22]

From sex robots, robots performing surgeries to robots as therapeutic companions for autistic children, the possibilities are continuously expanding.[23] Humanoid social robots, here meaning robots which interact with humans in a friendly manner and show human characteristics in appearance, are increasingly being produced to serve a variety of functions more tied to the

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[19] Andreas Birk (2011), 'What is robotics? An interdisciplinary field is getting even more diverse,' IEEE Robotics and Automation Magazine, pp 94-95.

[20] Ralf T.Kreutzer and Marie Sirrenberg (2020), 'What Is Artificial Intelligence and How to Exploit It', In *Understanding Artificial Intelligence*, Springer, Cham

[21] Karl-Heinrich Ebel (1987), 'The impact of industrial robots on the world of work', Robotics, Vol 3, Iss 1, pp65-72.

[22] Deep learning is a type of machine learning that can process a wider range of data resources, requires fewer human data pre-processing, and often delivers more accurate results than traditional machine learning approaches. The "deep" refers to the large number of layers of the neural network. Special networks are set up for this purpose, which can receive very large amounts of input data and process them over several layers. See: Ralf T.Kreutzer and Marie Sirrenberg (2020), 'What Is Artificial Intelligence and How to Exploit It', In *Understanding Artificial Intelligence*, Springer, Cham, pp. 5-8.

[23] Kathleen Richardson (2016), 'Sex robot matters: slavery, the prostituted, and the rights of machines', IEEE Technology and Society Magazine, Vol 35, No. 2, pp 46-53; Michael L. Lorentziadis (2014), 'A short history of the invasion of robots in surgery', Hellenic Journal of Surgery, Vol 86, No. 3, pp 117-121; [23] Kirsten Weir (2018), 'The dawn of social robots', Monitor on Psychology, Vol 49, No. 1, URL: https://www.apa.org/monitor/2018/01/cover-social-robots, p 50.

social workings of people's everyday lives.[24] What this means is that the tasks that a robot can perform are diversely and expanding. With this comes the possibility of an increasing complexity on the meanings that can be placed on the machine due to the ways in which its appearance and thought pattern can be designed to resemble the human form. With the growing sophistication of A.I. and Robotics technology, the development of robots that resemble humans in appearance and can perform more complex tasks- such as building social relationships with humans- is possible. This line of thinking is predicated on the idea that future A.I. technology must understand or embody human experience to be of use. Yet, if the aim is replicate human experience in the design of the A.I, then there is a probable risk of replicating enduring biases – historical, cultural, or otherwise – within the design as well. This is already seen through the racial profiling of computer programs used for security forces and governments.[25]

Literature (Re)-Viewed: More Than Human, Still An 'Other'.

Humanoid robots are an interesting technology to analyse as it illustrates this risk of replicating bias in a more corporeal fashion. On the one hand, they are symbols of a distant future where man and machine are indistinguishable. Where the humanoid robot will work towards aiding the progress of man. Yet likening robots to biological humans- particularly humans that have been othered- is a consistent theme within the literature surrounding how robots should be socially integrated into the everyday lives of a society. Karel Čapek's 1920 play *Rossum's Universal Robots (R.U.R.)* is largely cited as the first to use the word robot, which derives from a Czech/Slavic word (robota) meaning forced labour.[26]

It is also one of the earliest literary pieces to place forth the narrative of a human-like mechanical subject made to wholly serve human beings. But comes to some form of enlightened consciousness stoking a revolt against its subjection. An advertisement penned by Otto. O. Binder in 1957 also links robots and slavery. However, in his imagining, there is no fear of revolt, rather robots will forever remain slaves, performing all the tasks needed to care for humanity – in the advertisement humanity is clearly coded as white and male.[27] A more explicit example is the robot created by Westinghouse Electric Corporation in 1930 called "Rastus the Mechanical Negroe". Dark skinned and dressed in overalls Rastus' only capable movement is that it can bow. Its unveiling was highly lauded as a glimpse of a "mechanical servant", here overtly linked to black people and their servitude.[28]

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[24] Shaundra B Daily, Melva T. James, David Cherry, John J. Porter III, Shelby S. Darnell, Joseph Isaac, and Tania Roy (2017), 'Affective computing: historical foundations, current applications, and future trends', In Emotions and affect in human factors and human-computer interaction, Academic Press, pp. 213-231.

[25] The Economist (10 February 2022), 'How to make computers less biased', Youtube Video File, URL: https://youtu.be/lzvgEs1wPFQ

[26] Karel Čapek (1920), 'R.U.R. (Rossum's Universal Robots) Play', Translation by Paul Selver and Nigel Playfair, URL: http://preprints.readingroo.ms/RUR/rur.pdf.

[27] Otto O. Binder (1957), 'You'll own Slaves by 1965,' Mechanix Illustrated. 62-65. URL: http://blog.modernmechanix.com/youll-own-slaves-by-1965/. pp 62-65.

[28] Matt Novack (2010), 'Rastus Robot, The Mechanical Negroe (1931)', Blog post, URL: https://paleofuture.com/blog/2010/2/15/rastus-robot-the-mechanical-negro-1931.html

In their book, *Surrogate Humanity*, Neda Atanasoski and Kalindi Vora (2019) begin their introduction with the advent of the Robot Revolution.[29] This revolution is discussed in one of two ways: either the robots will care for all of humanity, freeing society of the need to work or the robots will signify the dawn of humanity's loss of being the most 'intelligent beings' and therefore masters of the earth. However, they clarify that the human figure most affected by this possibility is white and male.[30] What they aim to emphasize is that the category of 'human', as it functions in the logic of modernity, is a hierarchal structure where some can be more human than others. While at the very top -being white and male – designates one as most human of all.

Throughout western European modern history, the lesser humans were understood to be unworthy of protection. Therefore, they were treated as commodities. However, the threat of commodification is now extending. The advent of robots and A.I. and the increasing roles they can uptake has placed the threat of the extraction of value from one's life to affect the top of the modern human hierarchy. In other words, those who have historically been considered the most human of all -white, male, cishet, often Christian – are facing de-humanisation. Atanasoski and Vora (2019) illustrate this with the threat of the white male (blue-collar) workers jobs to robots. But the work of Shoshana Zuboff demonstrates another.

The core claim of Zuboff's (2019) thesis in her seminal work *Surveillance Capitalism*, is that technology corporate giants such as Google and Facebook, extract new sources of value from the vast amount of data they collect through tactics of surveillance by collecting information on our movements, likes, dislikes, work profiles and personal profiles.[31] Zuboff (2019) claims that this is an emerging frontier of capitalism that commodifies human experience.[32] A key criticism towards Zuboff's (2019) thesis is that the act of capturing personal information of individuals daily lives to commodify human experiences is not new nor emerging. Similar instances have occurred throughout the history of abusive capitalistic systems i.e., Apartheid Migrant Labour system with the compound hostels, USA police-industrial complex, historical-Transatlantic and Indo-Oceanic-slavery. All of which are intimately linked to black or othered bodies. [33]

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[29] The Robot Revolution refers to the rapid advancement of the technological capabilities of varying models of robots and their expanding roles within society, from performing surgeries to being online tutors. See: Patrick Lin, Keith Abney, and George A. Bekey eds (2012), '*Robot ethics: the ethical and social implications of robotics*', Intelligent Robotics and Autonomous Agents series, p 14.

[30] Neda Atanasoski and Kalindi Vora (2019), 'Surrogate humanity: Race, robots, and the politics of technological futur*e*' Duke University Press, p 2.

[31] Shoshana Zuboff (2019), *The Age of Surveillance Capitalism: The fight for a human future at the new frontier of power,* (London: Profile Books).

[32] Shoshana Zuboff quoted in Joanna Kavenna (4 October 2019), 'Shoshana Zuboff: "Surveillance capitalism is an assault on human autonomy"', *The Guardian*, URL: https://www.theguardian.com/books/2019/oct/04/shoshana-zuboff-surveillance-capitalism-assault-human-automomy-digital-privacy

[33] Nicholas Mirzoeff articulates this position well through his interrogation of how surveillance capitalism follows patterns of colonial conquests. He uses example of the transatlantic slave trade and plantation as sites whereby black bodies were surveiled in a similar fashion of extraction to what is occurring with digital technologies as explained by Shoshanna Zuboff. For further reading please see: Nicholas Mirzoeff (2020),

The only difference with surveillance capitalism is that the mechanisms are shifting for perpetrating such acts (through digital tools in an online space) and that those who have always been considered the penultimate human (white and male) are no longer excluded from such extraction. Surveillance and its intimate links to capitalistic gains only becomes viewed as a threat once white and male bodies are no longer excluded from it. Here again we see, how the status of being human- becomes only fully relevant when the dominance of those who have historically and culturally been considered the most human of all- white and male- are placed in jeopardy.

Jeff Bezos, Elon Musk, and Richard Branson are key examples. All are white, heterosexual men. Whose respective companies have played an extensive role in unfairly extracting resources from the natural earth making its founders some of the wealthiest people on the planet. Currently those natural resources are depleting along with the potential to continuously profit from its extraction. This places their statuses at the top of the human hierarchy at stake. Therefore, to overcome this, the pursuit of creating 'better' conditions and forms is in order.

Hence, the advanced technologies that may emerge from their commercially driven space-race will act to make them 'lesser humans' in that advanced A.I. robots will have progressed beyond human limitations and therefore progressed past the most human status- white men. But the A.I. robots will also serve to secure their positions as the wealthiest men on earth and potentially outer space by aiding in the creation of their envisioned space colonies and acting as the labourers in future space factories. Here, we see how the A.I robot technology not only replicates human experience but the historical and cultural prejudice inherent in the individuals and corporate structures creating it. These examples also demonstrate how future technologies threaten the control of who modernity deems the penultimate human- white men.

Yet, these technologies like robots are symbolically coded as 'othered' humans, often meaning black people, women, and queer people. Thus, robots are symbolically positioned to simultaneously be the saviours of humanity (meaning white men) by being better than them and to be wholly subservient to them as servants. This contradiction is an aspect that stems from the logic of modernity and shall be explored in depth in both case studies. The tension that this symbolic contradiction reflects is not often explored in discussions regarding how humans and robots may interact with each other in future contexts. The aim of such projects is to create a better future for biological human beings by creating a societally lesser yet more enhanced version of human experience. In fact, there are academic debates that actively argue the relationship that humans should have with robots is that of enslavement, endorsing the conceptual repetition of a system of oppression that would seemingly facilitate a more transformative and better future.

In 2010, Joanna Bryson presented a paper providing a way in which human and robot relations should be framed within a social setting. Her argument was that robots should be built, marketed, and legally considered as slaves.[34] Where the definition of 'slave' is based on the

'Artificial vision, white space and racial surveillance capitalism', Ai & Society, pp 1-11; Yvonne Jooste (2021), 'Surveillance capitalism as white world-making', Acta Academica, vol. 53.1, pp 44-67.

[34] Joanna J. Bryson (2010), 'Robots should be slaves', Close Engagements with Artificial Companions: Key Social, Psychological, Ethical and Design Issues, pp 1-12.

notion of servitude and no dehumanization occurs. The latter point is important here. She argued that no dehumanization occurs if a human is not involved in the concept of servitude.[35] A criticism towards this idea is the historical link the concept of slavery has with the ownership of people. Bryson (2010) was aware of this and suggested an alternative as well, where we perceive the robot as an extension of ourselves.[36]

There are two ways to problematise her suggestion. The first involves the historical legacy of the concept of slavery. In former slave owning colonies – like the Dutch East India Cape Colony of South Africa in 1717-1795 and The Antebellum South of North America in 1783-1861- the use of a slave metaphor would not bode well in these countries.[37] This can be asserted by numerous factors. However, most pertinently, in contexts such as South Africa and the U.S.A. the role of enslaving black Africans within these past colonial societies is still not fully consolidated within public memory and debate.[38] The racial and historical intricacies involved with the concept of slavery within these former colonial countries may result in unfavourable political and social implications for human-robot relations if slavery is the metaphor used there.

Thus, careful consideration of the context through which the robot as slave metaphor needs to occur as not every society would deem the concept acceptable. The second issue is implicitly related to the first. Which is that both slavery and the idea of perceiving a robot as an extension of one-self involves, even underlyingly, the notion of being human. In other words, it should be questioned whether dehumanization can even be avoided in Bryson's (2010) scenarios if the implicit nature of human-robot relations places the human first?[39] This is because the concept of human has historically been a hierarchal status where some humans have always been considered lesser than others. Subsequently always inducing a form of de-humanization. Hence it must be questioned by who or what definition of humanity is applied in Bryson's (2010) human-robot relation? It is in the notion of the hierarchal nature of 'human' that we see western modernity explicitly.

The concept of the 'human' can be understood as a status that describes a way in which to exist. The conception of human analysed here originates from western modernity - in the era of Enlightenment - and its logic of 'progress' that made it possible for some to be more human than others. Hence in this status of being comes a relation of power dynamics. Enlightenment era thinkers, from David Hume to Immanuel Kant, subscribed to the idea that the human was a 'rational animal'. This meant that one's humanity was determined by the nature of how one

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[35] Joanna J. Bryson (2010), 'Robots should be slaves', Close Engagements with Artificial Companions: Key Social, Psychological, Ethical and Design Issues, p 2.

[36] Joanna J. Bryson (2010), 'Robots should be slaves', Close Engagements with Artificial Companions: Key Social, Psychological, Ethical and Design Issues, pp 1-12.

[37] Nigel Worden and Gerald Groenewald (2005),' Trials of Slavery: Selected documents concerning slaves from the criminal records of the Council of Justice at the Cape of Good Hope, 1705-1794', eds. Van Riebeeck Society, no. 36; John. W. Blassingame (1977), 'Slave testimony: Two centuries of letters, speeches, interviews, and autobiographies', ed, Baton Rouge: Louisiana State University Press.

[38] Mahmood Mamdani (2015), 'Settler colonialism: Then and now', Critical Inquiry, vol. 41, no. 3, pp 596-614.

[39] Joanna J. Bryson (2010), 'Robots should be slaves', Close Engagements with Artificial Companions: Key Social, Psychological, Ethical and Design Issues, pp 1-12.

could think.[40] Closely associated to the extent that one could 'think' was bodily recognitions of difference. Both aspects reinforced categories of who was considered more human than others. In her work Zakiyyah Jackson (2020), expands on how the body was perceived to provide visualizable fact of reason for who was considered more human than others – which in turn produced logics of race and racialisation.[41] The concept of race links to the conception of being human exemplifies how western modernity simultaneously shifted nature into a sequential progression while forming hierarchies of difference.

For Jackson (2020) the status of 'human' and 'race' are linked in such a way that blackness does not necessarily equate to being nonhuman but rather a simultaneous malleable form of sub/super-human. Alexander Weheliye (2014) is more explicit by arguing that race played a critical role in western modernity defining who is considered human and nonhuman.[42] Where race is integral, rather than a consequence of who western modernity considers man/or women, human/nonhuman.[43] While blackness functioned as signifier for racialized bodies, in comparison whiteness functioned as the negation of being categorised as a racial identity.[44] Whiteness itself has varying meanings. It is generally implied to be defined as the 'norm', where cultural texts, media discourse and educational systems tacitly display whiteness as the absence of race.[45] In contrast those who are non-white are primarily identified through racial identities. Other authors have argued that whiteness may mean, an advantage to acquiring status and wealth or as the normative idea of what it means to be human.[46]

Whiteness being signified as the ideal and normative standard through which human existence is understood means that all modes of existence outside of it is deemed lesser than it and different. In this way it reinforces hierarchies of difference and systems of oppression such as racists and white supremist ideals.[47] The reinforcement of such oppressive ideals become

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[40] Zakiyyah Iman Jackson, Zakiyyah (2020), 'Becoming human: Matter and meaning in an antiblack world', NYU Press, vol.53, p24.

[41] Jackson expands on how in the Age of Exploration foundations were already laid with mythical tales of human-animal hybrids and humanoid animals that were said to be found in the lands of Africa. See: [41] Zakiyyah Iman Jackson, Zakiyyah (2020), 'Becoming human: Matter and meaning in an antiblack world', NYU Press, vol.53, pp5-7.

[42] Alexander G. Weheliye (2014), 'Habeas viscus', Duke University Press.

[43] Gareth Stevens provides a thorough illustration of what Weheliye's core thesis is regarding his interrogation of the category of human, western modernity and its links to race. In it he discusses how Weheliye critiques the notion that who is considered human and not human as defined by systems of relations of power of who is excluded and included in the category. Where in this thinking race is often conceived as a consequence of western modernist thinking rather than an integral part of forming it. See: Gareth Stevens (2018), 'Raced Repetition: Perpetual Paralysis or Paradoxical Promise?', International Journal of Critical Diversity Studies, vol., no. .2, pp 51-55.

[44] Talia Lavin (2019), 'The Boundaries of Whiteness Are Protected with Blood and Bullets', The Nation, URL: https://www.thenation.com/article/archive/replacement-theory-racism-white-supremacy

[45] Tom Nicolas (2020), 'Whiteness: WTF? White Privilege and The Invisible Race', Video Essay, URL: https://www.youtube.com/watch?v=o5zDo_TkSnA&t=734s

[46] Cheryl.I.Harris (1993), 'Whiteness as property', Harvard Law Review, p1725; Steven Garner (2006, 'The uses of whiteness: What sociologists working on Europe can draw from US research on whiteness', Sociology, vol. 40, no.2, p264.

[47] Owen J. Dwyer and John Paul Jones III (2000), "White socio-spatial epistemology." Social & Cultural Geography 1, no. 2, pp 209-222; Audrey Kobayashi and Linda Peake (2000), "Racism out of place: Thoughts on

concerning when future-orientated technologies such as robots are inferred racial categories based on whether they are outwardly black or white. In a 2018 study investigating the extent of bias placed upon robot designs, researchers concluded there was a racial bias against black designed robots in comparison to robots which were white in colour.[48] This is an example which illustrates that racial stereotypes can be inferred on technologies deemed for the future.

Furthermore, it is an indication of what Andrew Baldwin (2012) terms 'geographies of whiteness' which refers to the spaces, landscapes, natures, and bodies that are assumed to be white or in some way constructed with whiteness in mind.[49] He argued that more research needs to be conducted regarding geographies of whiteness and its relations to conceptions of the future. If not, the risk is that the ways in which white supremist and racist logics re-configure in the future will not be efficiently detected.[50] Thus, geographies of whiteness are either a space or body constructed with ideals of whiteness in mind. The future is an emerging imagined space. If we apply this to the example of white businessmen striving towards future human space colonies, we can see how racists ideals are replicated in conceptions of the future.

In the example, the future becomes a space through which humanity (primarily white men) are saved and helped by robots which are affective re-presentations of black people.[51] Thus, in this imagining of the future the robots become the embodied experience of black enslavement. From here we can see how conceptual historical and modernistic structures of oppression are replicated in the ideological framing of robot technology. Whereas the future changes into a dimension in which white men will be able conquer and extract the resources of the solar system resulting in a kind of future replication of historical forms of western European colonisation. The transformation of the robots into embodied representations of the black slave experience in this imagining of the future, is tied to its virtuality.[52] How the future's virtuality transforms it into a space of affective embodied re-presentations, such as the way it can be felt as a resource to be exploited will be explored in the case studies of Sophia the Robot and Lil Miquela.[53]

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[48] Christoph Bartneck, Christoph, Kumar Yogeeswaran, Qi Min Ser, Graeme Woodward, Robert Sparrow, Siheng Wang, and Friederike Eyssel (2018), 'Robots and racism.', In *Proceedings of the 2018 ACM/IEEE international conference on human-robot interaction*, pp. 196-204.

[49] Andrew Baldwin (2012), 'Whiteness and futurity: Towards a research agenda', Progress in human geography, vol.36, no. 2, p 174-187.

[50] Andrew Baldwin (2012), 'Whiteness and futurity: Towards a research agenda', Progress in human geography, vol.36, no. 2, p 172.

[51] Brian Massumi understands affect as ways through which to understand events of qualitative transformation. Affect encompasses the concreteness of feeling an experience. In his work Massumi attempts to address how the abstract is included in the concreteness of experience and embodiment through the notion of the virtual -that which is real but abstract- where the abstract becomes actually felt in the events transformation. See: Brian Massumi (2002), 'Parables for the Virtual', Duke University Press: Brian Massumi, Jacob Ferrington, Alina Hechler, and Jannell Parsons (2019), 'Affect and Immediation: An Interview with Brian Massumi.', disClosure 28.

[52] Andrew Baldwin (2012), 'Whiteness and futurity: Towards a research agenda', Progress in human geography, vol.36, no. 2, p 173; Brian Massumi (2002), 'Parables for the Virtual', Duke University Press.

[53] Andrew Baldwin applies Brian Masumi's understandings of affect and virtuality of the future's virtuality-where in it is an imagined transformative event that is both real and abstract - becomes actually felt, concrete,

whiteness and an antiracist geography in the new millennium.", pp 392-403; Andrew Baldwin (2012), 'Whiteness and futurity: Towards a research agenda', Progress in human geography, vol.36, no. 2, p 174-187.

Returning to *Surrogate Humanity*, Atanasoski and Vora (2019) argue that such links can productively be engaged with the modern history of liberal ideas about human freedom, specifically which are tied to the abolition of the transatlantic slave trade and the emergence of free labour as a racial category.[54] Two intriguing points they make are considered here. The first is that the framing of future technologies and their impact on economics is predicated on a type of human freedom that stems from a post-labour imaginary. This is an ideology they term "technoliberalism". They problematise this by highlighting the way in which "technoliberalism" repeats racialized and colonial narratives through automation. In their words, it is an updated version of racial liberalism.[55] Importantly such narratives are used in intricate ways to normalise and commercialise the technological products to a public.

Furthermore, they illustrate that robots allow that the freedom of the fully human liberal subject (whose historically been white, male, and cis-het) cannot exist without the un-freedom of the less than human or non-human.[56] Therefore, the imaginaries that fill this technological future (s) is that servitude can be mechanised. Thus, eliminating the need for racialized bodies whose function in modernity were always to serve. This substantiates the risk of how racists and white supremist logic may replicate itself in future-orientated technological projects. The research explored here aims to reinforce this idea.

Authors such as Andra Keay (2011), Nevena Georgrieva (2013), and Michael Coecklebergh (2015) have all grappled with the suggestion of framing robots as slaves in varying ways.[57] All of whom emphasising particularly the first issue highlighted with Bryson's (2010) argument. However, it is Coeckbergh (2015) who provides the most interesting position. Whereby, he questions why slavery is even considered an option. Specifically, he problematizes the role of humans remaining the 'master', detailed as follows:

> "...I construct the argument on what I call 'the tragedy of the master': automation technology developed to serve us renders us vulnerable, creates distance to material reality, and constrains our actions to those compatible with the technology."[58]

Why is it that the concept of slavery should be a point of consideration for human-robot interactions? Considering the concept's violent historical legacy would it not be best to avoid it in any form? Particularly in future contexts promising to provide better, inspiring conditions?

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through embodied experiences of fear and hope. See: Brian Massumi (2002), 'Parables for the Virtual', Duke University Press; Andrew Baldwin (2012), 'Whiteness and futurity: Towards a research agenda', Progress in human geography, vol.36, no. 2, p 172-173; Brian Massumi, Jacob Ferrington, Alina Hechler, and Jannell Parsons (2019), 'Affect and Immediation: An Interview with Brian Massumi.', disClosure 28.

[54] Neda Atanasoski and Kalindi Vora (2019), '*Surrogate humanity: Race, robots, and the politics of technological futures'*, Duke University Press, p 33.

[55] Neda Atanasoski and Kalindi Vora (2019), '*Surrogate humanity: Race, robots, and the politics of technological futures'*, Duke University Press, pp 28-30.

[56] Neda Atanasoski and Kalindi Vora (2019), '*Surrogate humanity: Race, robots, and the politics of technological futures'*, Duke University Press.

[57] Andra Keay (2011), 'A Robot, Slave Or Companion Species?', Master's Thesis, University of Sydney; Nevena Georgrieva (2014), 'Robots as modern slaves', Papeles, vol. 5, no. 9, pp 68-74; Michael Coecklebergh (2015), 'The tragedy of the master: automation, vulnerability, and distance', Ethics and Information Technology, vol. 17, no 3, pp.219-229.

[58] Michael Coecklebergh (2015), 'The tragedy of the master: automation, vulnerability, and distance', Ethics and Information Technology, vol. 17, no 3, p 220.

This emulates the contradiction found in the future space colonies example whereby the technological product is intended to usher in a better future and help humanity but the way in which it is symbolically portrayed shows re-presentations of systematic oppression.

The issue is that much of the literature discussing robots focus on the technology itself and how human consumers may react to it. There is not much attention placed upon how the producers of the technology imagine its purposes to be. A crucial gap is that there is not enough consideration given to how the creators of robots and other advanced technologies are ideologically framing the projects and contexts through which the technologies will emerge and operate in. Such ideological framing becomes important when recognising that many of the creators producing robots and advanced technologies are private companies.

These private companies may hold specific political and economic interests in how the technologies itself and the future-orientated project it emerges from are understood. Additionally, there is little focus on the ways in which the future is imagined within the robot and A.I technology projects and the potential political implications that may come from this. The scope of the literature explored above illustrate that there is a consistent element of replicating human experience in the pursuit of using technology as a driver of change for the future. However, through this replication there can also be a continuation of oppressive ideologies like slavery and racism. The possibility of the replication of oppressive ideologies is rarely explicitly explored. Analysing the intricacies of how creators of these robot projects expect their robots to be perceived is critical. This becomes even more important when the production of ethical guidelines for A.I and robots also do not provide critical attention to the developers of the technology nor how they frame the visionary projects the technologies come from.[59]

What is problematised here is that the ethical guidelines are being produced at all, with little consideration of the socio-political and economic motivations driving the creation of such technologies. This research project advocates that creating a particular moral position towards an advanced technology must factor in the initial intentions for the technology by its creators. If not, then whatever ethical position is created may overlook key biases for why one way of engaging with the technology has been deemed more appropriate than another. As shall be explored, with both Sophia the Robot and Miquela, it is the companies creating them that are setting the precedent of how people should interact with these robots. The aim of each project

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[59] Some of the publications reviewed for this study include Anna Jobin, Anna, Marcello Ienca, and Effy Vayena (2019), 'The global landscape of AI ethics guidelines', Nature Machine Intelligence, Vol 1, No. 9; Alexa Hagerty and Igor Rubinov (2019),'Global AI ethics: a review of the social impacts and ethical implications of artificial intelligence,' arXiv preprint arXiv:1907.07892; Ville Vakkuri, Kai-Kristian Kemell, and Pekka Abrahamsson (2019), 'AI Ethics in Industry: A Research Framework,' arXiv Preprint arXiv:1910.12695; Thilo Hagendorff (2020), 'The Ethics of Ai Ethics: An Evaluation of Guidelines', Minds and Machines, pp 1-22; Jessica Morley, Luciano Floridi, Libby Kinsey, and Anat Elhalal (2020), 'From what to how: An Initial Review of Publicly Available AI Ethics Tools, Methods and Research to Translate Principles into Practices', Science and Engineering Ethics, Vol 26, No. 4, pp2141-2168; Danie Schiff, Justin Biddle, Jason Borenstein, and Kelly Laas (2020), 'What's Next for AI Ethics, Policy, and Governance? A Global Overview', And Jürgen Kai-Uwe Brock and Florian Von Wangenheim (2019),'Demystifying AI: What Digital Transformation Leaders Can Teach You about Realistic Artificial Intelligence', California Management Review, Vol 61, No. 4, pp 110-134.

is not only for this to be normalised in the present but for the technologies to define the social context of their envisioned future.

Moreover, in line with Atanasoski and Vora (2019), it is agreed that colonial components are reiterated in technological futures, such as servitude being mechanised, the point highlighted here is that the reflexivity of the colonial components are far more intrinsic and deeper than what is being interpretated in the field at present. Beyond just scholars thinking that treating robots as slaves is a viable option, further interrogation is needed into why such a rationale of enslavement is deemed worthy of consideration despite its historical legacy. The argument made here is that with the lack of interrogation of such ideological contradictions, technological futures reproduce systems of oppression. As shall be explored in the robot cases of Sophia the Robot and Miquela, these ideological (re)-production of ideals of oppression act as a continuation of the project of modernity.

Methodology.

The interests of this research study lie in understanding the ways in which the respective companies creating Sophia The Robot and Miquela are framing not only the robots themselves but the overall projects they emerge from. By interrogating the creators' goals of these future-orientated technologies the underlining intentions of the projects and the ways in which it ideologically frames the purpose of the technologies that stem from it can be engaged. In doing so this study seeks to illustrate how the ideological framings of the projects infer socio-political and economic implications that may influence future societal contexts.

The argument made here Sophia The Robot and Miquela technology projects illustrate that despite the creators of each project – Hanson Robotics and Brud respectively – promising transformed and caring futures spurned by their products, the ideological framing through which this is meant to be achieved replicates conceptually oppressive systems of a western modernity past. Thus, the promised inclusive and caring futures the aim for cannot be achieved.

If aim is to understand the logic framing these two robots' projects, then is critical to interrogate the intentions of the producers and how they attempt to actualise their respective objectives. Therefore, the main research questions undertaken here for the exploration of this are:

1. *What are the main goals for the Sophia the Robot and Miquela projects?*

2. *How do the creators of the two projects seek to seek to actualise these goals?*

Following this the key objectives are:

1. *To identify the main goals of the Sophia the Robot and Miquela projects.*

2. *To understand the ways in which the creators of the projects are working towards making these goals a reality.*

The overall methodology for the research undertaken here was a qualitative comparative case study. The reasons for this choice were multiple. Little was known about the topics of the projects in question. Prior knowledge of Sophia the Robot and Miquela was minimal. The inductive and explorative logic of a case study approach allows for interpretations to generate

from the data collected rather than an established theory. With this research study interrogating the under-investigated area of the potential socio-political and economic implications future-orientated technologies like robots, a case study approach allowed for an in-depth informative and sizable collection of data.

Moreover, it expands the range of data that can be collected. The collection of the data for the research occurred during the Covid-19 pandemic which placed constraints on the accessibility of in-person campus access such as library consultations for physical sources such as books and archives that cannot be easily accessed online. Importantly case study a bounded approach which made it feasible to complete the research under the constraints presented by the pandemic.[60] Additionally the time constraint of needing to complete this research within a 2-year time frame meant that this research study required an approach that would allow for an exploration of a sizable amount of data while also setting clear parameters for its scope. Focusing on cases with bounded parameters provides this.

Additionally, it is an approach that can demonstrate the influence of key actors, which was a core feature within the subsequent analysis. To reiterate the study is interested the ways in which the creators of these future robot's projects (here being two private companies) are shaping the ways in which the technologies the projects produced are understood. A qualitative case study provides this by engaging in-depth the ways in which specific actors (here being the creators of the robot projects) influence the cases. This also aids the study in exploring a research area that is under-investigated within the literature surrounded future-orientated technological projects, where private actors, rather that public ones are given focus.

However, there are limitations to this approach. One of which is the extent to which the study can be generalized. However, the aim of the research conducted here was not to achieve generalizability. As with most qualitative approaches the understanding that reality is unique to specific observer plays a role here. The aim of this research study was to understand the ways in which its results may be applied to the similar cases of future-orientated technologies created by private actors. This is not to say that the conclusions made here will appear exactly in other similar research, rather the hope is to provide a different perspective through which such projects could be understood. in the sense that if another researcher conducts a similar study with similar case. limitations here may include validity and reliability.[61] Here internal validity is used where the quality of explaining the phenomena examined is given primacy. Triangulation- meaning a variety of sources - were used to collect and verify the information garnered from the data found.[62]

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[60] Meaning when there are limits ie. Short time and resources on what a researcher is able to afford on a particular piece of research is limited in areas, it is highly pragmatic to be able to tightly and precisely define what is going to be researched. See: Malcom Tight (2021), 'Selection, Context and Theory in Case Study', In Understanding Case Study Research: Small-scale Research with Meaning, Sage Research Methods.

[61] Here validity refers to whether are the chosen methods for collecting the data appropriate for answering the research question. Reliability refers to the extent through another researcher may be able to produce the same results with chosen methods. Both validity and reliability address the overall usefulness of a study.

[62] Andreas M. Riege (2003), 'Validity and reliability tests in case study research: a literature review with "hands-on" applications for each research phase', Qualitative market research: An international journal, vol.6, no. 2, pp72-86.

Case selection criterion:

Specific criteria were used to select the subsequent cases studied. The first was that it needed to involve a human-like social robot. Meaning the projects in question needed to engage with the establishment of a 'robot' and that 'robot' would be primarily focused on interactions with human beings in a social context. This is because the research here is interested in understanding how ideologies tied to modernity reflect in the future. As previously discussed, human-like robots re-present both ideals of modernity through the concept of the 'human' and are symbols of the future. With Sophia this was easily established as she is primarily marketed as a 'social robot' in its traditional sense.

However, in the case of Miquela, as shall be seen later, some would not consider her a robot. But the position taken for this study differs with that opinion. Miquela is considered and engaged in both by her creators and fans as a robot. Moreover, the reasons as to why she may not be considered a robot adds to the complexity of that case and shall be addressed in subsequent sections. Secondly, the projects in question needed to have garnered large enough public and media attention within their contexts, whereby the creators of the projects allowed for engagement into what their intentions are with their social robot projects. The reason for this was to see to what extent the media may play with the how the goals of the projects are realized. Lastly, the social robot projects needed to be the creations of a private actor, as it is this position in which the study is interested in exploring.

Why these two cases were chosen is linked one primary reason. The first is that at its core this study is interested in how patterns of the past are repeated in future contexts through the ways in which societal transformations occur in the present. The very idea of a robot out thinking a biological human seemed only feasible in the world of fiction 70 years ago. Yet, today there are scholars who advocate for the implementation of slavery as means through humans should relate to human-like robots that are becoming more life-like by the year. The very idea that, even as a conceptual framing, a system of slavery is seen to be a viable option for human-robot interactive future is fascinating. The Sophia the Robot and Miquela projects are examples of projects that frame the humans improved futures as reliant on technologies that replicate human experience and appearance in some way. These cases fit the nature of the investigation the study seeks to explore. They are also both robot projects that are in a more mature phase in their development, with the ideological foundations driving the projects firmly set by their creators.

How are the cases defined?

An important step of this study was establishing its scope. In other words what shall and shall not be focused. The chosen method for this was to bound the cases by their context- meaning key details explaining how the social phenomenon (project goals) is occurring or key details explaining what led to the social phenomenon (the framing of the projects) in question. The reason behind this choice is intrinsically linked to the specific questions this study is interested in.

As established the primary research question is questioning what the goals of the projects are and how they are being realized? Therefore, defining the cases by their context- ie. Narrowing

it to the key details explaining how the projects in question are shaped by their respective creators- is crucial. Hence, defining the cases by their context, specifically through the key details that explain how they are being shaped is essential to answering the primary question posed here. It is also bounded by time- where the research is only focused on the first phase of the respective robot projects in question. Which is the phase that is setting the foundations for how the goals of the projects are to be fully realized in the a near or distant future.

Data Collection Methods:

The year range through which the sources were collected was from 2016-January 2021. As both projects officially became public in 2016. It is also the time frame through which the first phase of both projects operated in. The first phase of the projects are highly interested in establishing the ideological foundations of what the projects aims are. Yet, this closed timeframe highlights another limitation of this study regarding its generalizability. In that this is only one part of a long-term plan for the two robot projects, the others are still presently unfolding. However, this is not an issue as the research presented here are focused on the projects ideological basis which come from their goals that are outlined in the first phase of each project, providing sizable data range.

These goals may change over-time, but the initial positions can provide important aspects of how future-orientated technological projects created by private actors situate their varying interests. Data was collected from online internet sources ranging from video and audio interviews conducted with the creators describing the nature of their projects, video interviews featuring the social robots themselves were also used as sources. Academic literature published either by or in relation to the respective projects were also data points. Media pieces such as news articles, blogs and video essays commenting on the projects were also sourced.

The data was divided as follows.

1. Company Sources: Such as websites, and directory profiles, official social media accounts.

2. Interview Sources: Both audio and video interview sources were used. They were divided into two components. (1) interviews featuring only the creators, (2) interviews featuring only the robots. This was done to see the differences in similarities in the way the creators intended the projects to be seen and the way in which the projects robots correlated with this vision. Along with understanding what narratives were being perpetuated by both.

3. Academic Sources: This two was divided into two components. (1) literature published by the project creators, (2) literature related to project creations.

4. Media Sources: This included news articles commenting on the projects, video essay's commenting on the projects and think-pieces on the projects.

Data Analysis.

Conceptions of modernity such as progress, coloniality, commodification of the 'other' and the use of female imagery was used as analytical tools through which to explore how these two future-orientated technological projects reproduce constructions of colonial logic and systems of oppression in their constructions of the future. In doing so, the ways in which future contexts are re-worked with notions of oppression can be illustrated, highlighting the complex ways in which the ideological framings of future-technological projects infer socio-political and economic implications. Using past and present examples to substantiate this it is hoped that a more critical lens of promises of better futures can be taken.

Chapter 2: How The Oppression of Modernity Repeats Itself: The Case of The Sophia The Robot Project.

The introduction of this study noted that Elon Musk is intent on colonizing Mars using his company -SpaceX- technologies. In a 2017 interview, Musk was asked why human beings should build a city on Mars. His answer was that he believed it is important to have a future that is inspiring and appealing.[63] Five years following this interview, Musk would announce the production of the Tesla Bot, which would be a friendly humanoid robot designed to perform dangerous and repetitive tasks.[64] This product too is designed for a coming future where the costs associated with manual labour can be extensively reduced using humanoid robots that can navigate a human world.[65] The Tesla Bot forms a part of Musk's companies' broader vision of the future where emerging technologies not only act to 'liberate' human beings from biological limitations but does so in a way that is assumed to not be harmful.

Musk's notion of an "inspiring future" is predicated on a "failing present". Whereby the future is representative of a temporal space that will not only be different to the present but different in a way that presumes it to be 'better'. One prominent 'failing' that is a current issue is the increasing impact of global warming on the state of the natural earth. From rising sea levels, severe fires, and increasing insect swarms in various parts of the world, our current mode of living is no longer sustainable.[66] As a result it has set the earth towards a path of presumed inhabitability for human beings.[67] In this regard, aiming for a future that presents itself as 'better' is not unthinkable.

However, by what or whose standards of 'better' is the future being modelled after in SpaceX's goals? Modern cultural critic, Tom Nicholas (2020) has expanded on the allure of Musk's focus on a specific future through the way it can provide belief within the work his companies are

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[63] Elon Musk provided his answer in conversation with Chris Anderson- Head Curator of TED. The discussion involved the various projects Musk's companies aim to complete in the next decade. He went on to explain that humanity not becoming multiplanetary space faring is a depressing vision of the future. See: TED (2017),' Elon Musk: The future we're building – and boring|TED', YouTube, Video Interview, URL: https://youtu.be/zIwLWfaAg-8?t=2051, mins 34:00-35:55.

[64] Kif Leswing (2021), 'Elon Musk says Tesla will build a humanoid robot prototype by next year', CNBC, Tech section, URL: https://www.cnbc.com/2021/08/19/elon-musk-teases-tesla-bot-humanoid-robot-for-repetitive-tasks.html

[65] For a more concise problematisation of the implications of this see: Andrew Maynard (2021), 'Elon Musk's Tesla Bot raises serious concerns – but probably not the ones you think', The Conversation, URL: https://theconversation.com/elon-musks-tesla-bot-raises-serious-concerns-but-probably-not-the-ones-you-think-166714

[66] The year 2020 alone saw severe fires devastate towns in Australia and the United States. Moreover, amidst severe droughts locust swarms overtook parts of Kenya and Ethiopia as well as the conflict zone of Yemen. The growing human cost of natural disasters caused by climate has presented global leaders with a need for more urgency in trying to mitigate the climate crisis. See: BBC (2020), 'Australia fires: A visual guide to the bushfire crisis', Climate Change, BBC, URL: https://www.bbc.com/news/world-australia-50951043; Monique Bennet (2021), 'New breeding swarms of desert locusts pose major threat to food security in Horn of Africa and Yemen', Our Burning Planet Op-Ed, Daily Maverick, URL: htttps://www.dailymaverick.co.za/article/2021-09-27-new-breeding-swarms-of-desert-locusts-pose-major-threat-to-food-security-in-horn-of-africa-and-yemen/

[67] United Nations Office for Disaster Risk Reduction (UNDRR) (2020), 'The human cost of natural disasters 2000-2019', Centre for Research on the Epidemiology of Disasters United Nations Office for Disaster Risk Reduction, URL: https://www.preventionweb.net/files/74124_humancostofdisasters20002019reportu.pdf

doing. SpaceX's goals provide an appealing departure from our current failing global circumstances to one of an improved future condition. But behind the company's 'awe-inspiring' vision of the future, lies an indication of its true purpose.

Nicholas (2020) illustrates this by showing how at first glance the future Musk endorses appears to be one which is inclusive of all of humanity. Where all peoples of planet earth shall partake in becoming a multiplanetary space-faring species. However, by viewing the company's vision of an inspiring future as a business venture, it becomes clear that the future envisioned is one aimed to benefit a specific elite few.[68] In other words, SpaceX's pursuit to colonise Mars is a mission to pioneer the future industry of privatised space travel, particularly for those who can afford it.[69]

This change in perspective highlights certain implications of the company's 'inspiring" vision of the future, one of which is economic. Whereby SpaceX could be the sole or at least one of the few private companies to have license over travel towards unknown planets. Another implication is political. Whereby if planet Earth became completely inhabitable, SpaceX shall be a major stakeholder in deciding who and why people may travel abroad their ships to more habitable planets. That is to say if this future is ever realised in exactly the way the company imagines it to be. An outcome which Musk himself has acknowledged as unlikely. [70]

Regardless, SpaceX's pursuit of colonizing Mars provides fascinating insight into how the creators of emerging technologies envision future (s) that are different and improved from the way in which society currently operates. The emerging technologies are often framed as providing the necessary tools to make the required radical changes for the betterment of humanity. For instance, the technologies within SpaceX goals are framed as aids towards the survival of humanity through space travel. In a similar vein Hanson Robotics, the company behind the creation of Sophia the Robot, frame their quest to develop Sophia into a 'truly sentient benevolent living machine', as one that is aimed to help the survival of humanity.

The company's aspiration is 'to make robots come to life' and make A.I. turn out well.[71] Chief scientist of Sophia, Ben Goertzel, has explained that by making A.I. turn out well, Hanson Robotics mean to create an artificial general intelligence (A.G.I) that is designed towards the goal of the A.I. 'actually feeling unconditional love, not just behaving as if it does.'[72] Where the aim for the company is to make machines that care immensely for people and in turn will

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[68] Tom Nicholas (2020), 'The Fake Futurism of Elon Musk', YouTube, Video Essay, URL: https://youtu.be/5OtKEetGy2Y

[69] Tom Nicholas (2020), 'The Fake Futurism of Elon Musk', YouTube, Video Essay, URL: https://youtu.be/5OtKEetGy2Y

[70] Elon Musk: The future we're building – and boring|TED', YouTube, Video Interview, URL: https://youtu.be/zIwLWfaAg-8?t=2051.

[71] Hanson Robotics (2021), 'Home page', URL: https://www.hansonrobotics.com/

[72] Reese Jones (6 April 2017), 'Designing an A.I. to Love: Consciousness Hacking -Ben Goertzel and Julia Mossbridge', Webinar by Institute of Noetic Sciences, URL: https://youtu.be/kQjOT_MLxhI, mins 40:00-45:00.

help humans reach their full potential.[73] This is substantiated by the company's website which explains the mission of its robots' as follows:

> "Our remarkably human-like robots serve as platforms for Hanson Robotics' A.I and robotics research in the areas of education, healthcare, sales, and entertainment applications. In time, our robots will come to understand and care about humans through cultivating meaningful relationships with the people whose lives they touch."[74]

Therefore, in a distant or (near) future Hanson Robotics envisions its Sophia the Robot project will have successfully created a 'true fully sentient, benevolent living machine', that looks human-like in appearance and cares for humanity. Here too, it is asked, by what or whose criterion will Sophia's sentience be crafted after? Can unconditional love and care become measurable so that sentient Sophia will be tested against it? If so, by what means are these traits quantifiable?

As in the case of SpaceX's colonisation pursuits following the assumption that present circumstances will not last and must be rectified, Hanson Robotics quest to create a sentient human-like benevolent living machine is predicated on the assumption that humans at present are not at their 'fullest' potential. Founder and Chief Executive Officer (CEO) of Hanson Robotics, David Hanson has clarified that the company's aim is:

> "To make machines that care about people deeply and help us to become our best. Not just mirroring people, mimicking us because otherwise we'd be giving it all the prejudice and biases that exist in humans. We want to be able to transcend the shortcomings of humanity and our biological evolution"[75]

Therefore, the machines Hanson Robotics aim to create will aid humans in reaching beyond their limitations and ensure the species continued existence into the future. Hanson Robotics pursuits perpetuate the idea that its goals and visions of the future will be an improvement and better condition for all of humanity. Whereby the issues of our current condition shall be mitigated or at most eradicated. It is argued here that an improved condition cannot be achieved because the Sophia The Robot project emulates the ideology of modernity, which functions on structures of oppression.

Hence, while Hanson aims towards creating living human-like machines that have not inherited human prejudice and biases, the inheritance of prejudice is unavoidable precisely because of how the Sophia The Robot project's foundational structures emulate three core aspects of modernity. The first is that the project's basis lies on the 'idea of progress", which serves to provide justification as to why the Sophia The Robot project's vision of the future is an improved condition. This justification is predicated on the rhetoric of salvation, a definitive

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[73] Business Extra (3 February 2021), 'Sophia the robot on 'why I matter', Podcast hosted by Christopher, with Kelsey Warner in this episode, URL: https://www.thenationalnews.com/podcasts/listen-sophia-the-robot-on-why-she-matters-1.1158386

[74] Hanson Robotics (2021), 'What is the mission of Hanson Robotics robots?', URL: https://www.hansonrobotics.com/faq/

[75] [75] Conscious Pictures (5 June 2018), 'Consciousness Central 2018 - Program 5 with Sophia the Robot, David Hanson, Julia Mossbridge (Inistitute of Noetics Sciences)', Youtube video, URL: https://youtu.be/wozYnQO3Qto, mins 21:47-22:04.

feature of modernity and one which emerged amidst a colonisation project far closer to planet earth that occurred in the 16th century.

<u>Salvation in Progress.</u>

Following, Christopher Columbus first voyage to and from the Americas in 1494, Pope Alexander VI through the Treaty of Tordesillas, divided the 'New World' into two.[76] One half was given to the Spanish Royal Monarch's to rule. The other to the Portuguese Royal Monarch.[77] In 1529, through the signing of the Treaty of Zaragosa, Spain and Portugal made these lines of division more definitive. Thus, Spain was given claim over the western side of the 'New World', including most of the Americas excluding Brazil. While Portugal claimed the eastern side including parts of Asia and the West coasts of Africa. So, a vast mass of the entire planet, through the creation of fictional territorial lines by the Pope and the Monarchs of Spain and Portugal, was taken as their own.[78] This would mark the beginning of western European colonial conquests.

Colonialism refers to the complete political occupation of a country or peoples by another country, where the occupied country is economically exploited, often forming part of the conquering country's empire.[79] The most dominant form of it came in the shape of western European colonialism, instigated by the Spanish and Portuguese conquests of the Americas and other parts of the world (1500-1700).[80] Then continued and revised by the English, Dutch, French and Germans in the conquests of Africa and Asia (1750-1945).[81]

To make sense of the violent means through which they conquered these territories, the rhetoric of modernity – of Christian salvation, progress and scientific rational- was used.[82] Modernity was an all-encompassing project which served as an ideological tool to think through the world. This is most evident in its concept of 'the idea of progress'.[83] Shanin Teodor (1997) gives a

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[76] This is a paraphrased version of an explanation provided by Walter Migonolo in a presentation of his work. For further reading please see: Walter D. Migonolo (2011), '*The darker side of Western modernity*', Duke University Press, 2011.

[77] Pope Alexander VI initially demarcated the land giving an extensive amount to the Spanish crown -then ruled by Ferdinand II and Queen Isabella I. But the monarch of Portugal, King João II disputed this and requested that the line be moved under his suggestions. The Spanish monarchs would eventually agree to this leading to the signing of a treaty legitimising this change in Tordesillas. See: Lawrence A. Coben (2015), 'The Events that led to the Treat of Tordesillas', terrae incognitae, vol. 47, no.2, pp 142-162.

[78] Walter Mignolo (2016), 'Walter Mignolo: Global Coloniality and the World Disorder', Youtube Video, Dialogue of Civilisations, URL: https://youtu.be/pIURo8B_YdE

[79] Nelson Maldanado-Torres (2007), 'On the Coloniality of Being: Contributions to the Development of a Concept', Cultural Studies, vol. 21, no. 2-3, p 243.

[80] Aníbal Quijano (2007), 'Coloniality and modernity/rationality', Cultural Studies, vol.21, no. 2-3, p 168.

[81] Walter Mignolo (2011), 'The darker side of western modernity', Introduction, Duke University Press, p 7.

[82] Walter Mignolo (2011), 'The darker side of western modernity', Introduction, Duke University Press,

[83] Though modernity and the idea of progress is often used interchangeably to describe the same processes, how it is understood here is that the concepts differ slightly but are interrelated. Modernity is understood as the broad overarching project that used varying methods of reasoning to re-define social relations. 'The idea of progress' is the core underlining logic that features within all the methods of reasoning deployed by modernity to re-shape social relations within the world. Where it provided the core logic of linear temporality that designated particular categories of progression from an 'ignorant', uncivilised past to a 'intelligent' 'progressive' future.

thorough explanation on how 'the idea of progress', as implemented by western European colonists, (re)-shaped how social reality should be perceived and function.[84]

On one end the concept provided explanation for the extent of diversity within humanity. As European travellers set out to 'discover' 'new' worlds and people, the extent of encountering varying human life needed to be made sense of -through order and categories- that was acceptable for the colonists. The 'idea of progress' also transformed the perception of time. It no longer viewed the worlds time as cyclical but instead linear.[85] In this way life was no longer represented by the cycles of birth and death, rather it was defined by the notions of a past, a present and a future. Teodor (1997) illustrates this through provocations that were answered by the 'idea of progress':

> 'What produced diversity? The different stages of development of different societies. What was social change? The necessary advance through the different social forms that existed. What is the task of social theory? To provide an understanding of the natural sequence of stages from past to future.'[86]

Essentially the 'idea of progress' is a particular interpretation of social reality that orders, classifies and comprehends the complex diversity of human life through the scope of a linear progression from a back-ward, 'uncivilised', past towards an unidentifiably better, 'civilised' modern future.[87] It provided an 'acceptable' sequence of how to understand the nature of the world through logical and scientific reasoning. This benefitted western European colonialists as the 'idea of progress' provided reason for their societies to be deemed the peak of human progress. Subsequently the logic of modernity then perceived the conquered societies as less modern, and therefore less deserving of equal treatment.

The Sophia The Robot project emulates modernity in this regard through an important feature. Which is the rhetoric of salvation and its use as a justification for ideals of progress. Within western European conquests the salvation was framed through civilising missions and the spreading of the Christian faith. For example, the role of Christian missions in colonial rule served to proliferate narratives of progress and civilisation through framing indigenous communities as heathens in need of repentance from God, a trait they could acquire through western European thinking.[88] This worked as a justification for colonialists' violent conquests where they would genocidally kill thousands of societies across the world based on hierarchies of difference.

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[84] Shanin Teodor (1997), 'The idea of progress', The post-development reader, Zed Books: London and New Jersey,

[85] Shanin Teodor (1997), 'The idea of progress', The post-development reader, Zed Books: London and New Jersey, pp 66-67.

[86] Shanin Teodor (1997), 'The idea of progress', The post-development reader, Zed Books:London and New Jersey, p 67.

[87] Shanin Teodor (1997), 'The idea of progress', The post-development reader, Zed Books: London and New Jersey, p 68.

[88] Ryan Dunch (2002), 'Beyond cultural imperialism: Cultural theory, Christian missions, and global modernity', *History and Theory*, vol 41, no. 3, pp 301-325.

Similarly, the Sophia The Robot project views the creation of a truly living sentient machine as the means through which human existence shall survive. The idea is that by creating the machines with human emotions they will be able to care for humanity. This development of human emotions is to be achieved through the various social interactions the robots have with people. The data collected from these interactions is hoped to allow the A.I. to learn with the main outcome being that it may hold better compassion or general intelligence than humans.[89] By having living machines that care for humanity and surpass human intelligence, Hanson Robotics hopes that the Sophia The Robot project would produce sentient robots that shall help humans become better and in turn help save the planet.[90]

Whereas in the colonial conquests of the 16th century the salvation occurred through Christian theology as a means towards civilisation, in the Sophia Robot project, the salvation shall occur through the progression of technological products, that shall transcend the current condition of humanity and bring humanity to its higher potential. Note that within both, the idea is that there is a better condition that needs to be strived towards. 16th century western European colonists viewed their societies as the ultimate point of progress, whereas the Sophia The Robot project, views living machines as a means to go beyond the point of progression it deems humanity is currently at.

Both operate on the notion of a linear progression, infused with modern ideals. Hence, the rhetoric of modernity is the constant updating of the rhetoric of salvation. This salvation may either be through converting to Christianity or, salvation by progress and technology or, salvation by development and modernization, or salvation by global market democracy.[91] The issue lies in the deceptive double nature of modernity where the rhetoric of salvation hides the corruptive nature of modernity functioning on structures of oppression.

This leads us to the second aspect in which the Sophia The Robot project replicates modernity and the aspect which emphasises why prejudice is unavoidable within Hanson Robotics pursuit of sentient living machines. The issue is that the specific type of sentient robot Sophia is intended to become within the framing of the project's goals – a robot that is human-like in appearance and caring towards humanity's- is envisioned within the framing of the Sophia The Robot's project goals as being re-presentative of the *only* way in which all other sorts of sentient robots may be understood. Meaning other imaginings of a sentient robot – one that is not human-like or does not care for humanity but something else- are not considered. This perpetuates a repression of knowing. Which is a component of modernity that is a residue of its origins from the western European colonial project that continues to this day, called coloniality.

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[89] Reese Jones (6 April 2017), 'Designing an A.I. to Love: Consciousness Hacking -Ben Goertzel and Julia Mossbridge', Webinar by Institute of Noetic Sciences, URL: https://youtu.be/kQjOT_MLxhI, mins 40:00-45:00.
[90] ITU (2018), 'AI for Good 2018 Interviews: Dr David Hanson, Founder and CEO, Hanson Robotics, ans Sophia', ITU A.I. For Good Global Summit, YouTube Video, URL: https://youtu.be/fkqjtkJnbSs
[91] Walter Mignolo (2017), 'Interview - Walter Mignolo/Part 2: Key Concepts', Transcript Written by E-International Relations, URL: https://www.e-ir.info/pdf/67501, p 2.

<u>To Control How a World is Known, is to Control How it shall Be:</u>

Coloniality survived beyond colonialism. It refers to the long-standing patterns of power that define culture, labour, intersubjective relations, and knowledge production beyond the limits of colonial administration.[92] It serves as the justification for the exploitation of the worlds resources by European systems of dominance, such as modernity, capitalism and colonialism.[93] It is maintained alive in books, academic performance criteria, cultural patterns, people's self-image, and many other areas of modern experience.[94] The ubiquity of its presence stems from its symbolic nature. Peruvian sociologist, Aníbal Quijano (2007) articulated clearly when stating that coloniality in the first place, is the colonization of the imagination. He expands:

> "The repression fell, above all, over the modes of knowing, of producing knowledge, of producing perspectives, images and systems of images, symbols, modes of signification, over the resources, patterns, and instruments of formalized and objectivised expression, intellectual or visual…These beliefs and images served not only to impede the cultural production of the dominated, but also as a very efficient means of social and cultural control, when the immediate repression ceased to be constant and systematic".[95]

Quijano (2007) argued further that there can be no modernity- ideals of progress as based off the colonial project-without there also being coloniality.[96] We see this continuance of European colonial ideals reflected within the SpaceX example. The company's perception of its colonization mission as one of aspiration, towards a future filled with human progress and survival simultaneously emulates the way through which colonisation was viewed by 16th century European colonists and masks colonisation's historically accurate meaning of destruction and violence enacted upon the inhabitants of unknown lands. What shall happen when upon arrival on Mars, SpaceX colonisers discover that, as history has shown, there are already inhabitants on these 'unknown' lands? This is not a point often addressed within the company's vision.

Coloniality operates through a repression that is symbolic in nature. Portuguese sociologist Boaventura de Sousa Santos work provides clarity on how the repression within coloniality acts. In his book *Epistemologies of the South: Justice against Epistemicide*, de Sousa Santos (2015) explores the various modes of knowing the world developed from communities who resisted oppression from capitalism and colonialism.[97] The basis of the book's grand thesis is that there can be no global social justice without their first being global cognitive justice.[98]

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[92] Nelson Maldanado-Torres (2007), 'On the Coloniality of Being: Contributions to the Development of a Concept', Cultural Studies, vol. 21, no. 2-3, p 243.

[93] University of Bristol, 'Coloniality, decoloniality, and the legacies of imperialism', Futurelearn Course article, URL: https://www.futurelearn.com/info/courses/decolonising-education-from-theory-to-practice/0/steps/190003#:~:text=Coloniality%20is%20another%20way%20to,by%20European%20systems%20of%20domination.

[94] Nelson Maldanado-Torres (2007), 'On the Coloniality of Being: Contributions to the Development of a Concept', Cultural Studies, vol. 21, no. 2-3, p 243.

[95] Aníbal Quijano (2007), 'Coloniality and modernity/rationality', Cultural Studies, vol.21, no. 2-3, p 169.

[96] Walter Mignolo (2017), 'Interview - Walter Mignolo/Part 2: Key Concepts', Transcript Written by E-International Relations, URL: https://www.e-ir.info/pdf/67501, p 2; Aníbal Quijano (2007), 'Coloniality and modernity/rationality', Cultural Studies, vol.21, no. 2-3,

[97] Boaventura de Sousa Santos (2015), 'Epistemologies of the South: Justice against epistemicide', Routledge.

[98] Boaventura de Sousa Santos (2015), 'Epistemologies of the South: Justice against epistemicide, 'Routledge.

What is meant by this is that how one knows the world and how this knowing is articulated is fundamentally tied to how the world is experienced. It then follows that knowledge production and its consumption pervade action within the social world.[99] Therefore, if one can control the way in which a subject is known, or the knowledge about it, then one also has control over how the subject is acted upon or interacted with. Hence, when Quijano (2007) speaks of repression over the modes of knowing he is referring to how *a specific perception* of the world – for example the western modernity idea of progress- was enforced as the perception *for all* of the world. In turn making invisible all other forms of understanding the diversity presented within the world.

This outlines two important points. Firstly, within coloniality the distortion of reality functions by a single specific way of knowing repressing all other ways in which the world can be interpreted. Secondly, this repression is a pre-requisite for the act of power because of the way in which it ignites further production of power.[100] Meaning that controlling the perception of a social world or subject allows production of other means of controlling it. This supports the claim that knowledge production pervades action.

In the case of the Sophia The Robot project, how Sophia would be perceived – as a human-like 'sentient' robot -was primarily dictated through media coverage framing of the robot. To frame something is to place forth an interpretation of it, to structure its meaning.[101] Therefore, frames are never neutral, they are always imposing a specific logic on a topic and shaping discussion on it.[102] Frames encourage specific interpretive lens' that are dynamic and derive from existing cultural narratives and symbolic traditions.[103] Frames are useful because they define a topic in strategic ways. How Sophia was framed became fundamental in the reinforcement of what it re-presented because the project was novel.

For many around the world an initial encounter with a robot, stems from the media.[104] Giulio Sandani and Alessandra Sciuttie (2018) in their interrogation of processes humanizing robots showed that the way robots are portrayed by the media and in public discourse is often illusionary.[105] Where the level of intelligence and interaction capabilities ascribed to a robot does not actually coincide with the functionality of the robot.[106] This sentiment is echoed by a number of academics demonstrating the difficulty of people being unable to not

[99] Boaventura de Sousa Santos (2015), 'Epistemologies of the South: Justice against epistemicide', Routledge.

[100] Boaventura de Sousa Santos (2015), 'Epistemologies of the South: Justice against epistemicide', Routledge.

[101] Stephen D. Reese, Oscar H. Gandy Jr, and August E. Grant (2001), 'Framing public life: Perspectives on media and our understanding of the social world', eds, Routledge.

[102] Luke Winslow (2017), 'Frames Analysis', In The sage encyclopedia of communication research methods, ed Mike Allen (Vols. 1-4). Thousand Oaks, CA: SAGE Publications.

[103] Luke Winslow (2017), 'Frames Analysis', In The sage encyclopedia of communication research methods, ed Mike Allen (Vols. 1-4). Thousand Oaks, CA: SAGE Publications.

[104] Céline Ray, Francesco Mondada and Roland Siegwart (2008), 'What do people expect from robots', In 2008 IEEE/RSJ International Conference on Intelligent Robots and Systems, pp. 3816-3821. IEEE.

[105] Giulio Sandani and Alessandra Sciuttie (2018), 'Humane robots—from robots with a humanoid body to robots with an anthropomorphic mind', ACM Trans. Hum.-Robot Interact , pp.1-4.

[106] Giulio Sandani and Alessandra Sciuttie (2018), 'Humane robots—from robots with a humanoid body to robots with an anthropomorphic mind', ACM Trans. Hum.-Robot Interact , pp.1-4.

anthropomorphise robots in some way.[107] This emphasizes that media encounters are the most prominent ways in which people access robots and that these encounters are often filled with misconceptions of the robot's abilities. Such a misconception featured in the initial promotion of Sophia The Robot.

The Sophia The Robot project officially started when Sophia The Robot 'woke up' and came online on 14 February 2016.[108] In November of the same year, Hanson Robotics, the A.I. company that created Sophia, released a series of YouTube videos, aptly titled 'Sophia awakens' demonstrating some of the facial expression and conversational functions Sophia the Robot could perform.[109] Combined the videos garnered over 1 million views but it would not be the event that would catapult Sophia the Robot towards global public recognition.

That event occurred some months later, in late 2017 at the Saudia Arabia Future Investment Initiative function, where Sophia was publicly granted Saudi Arabian citizenship.[110] The announcement gained wide-spread media circulation sparking large interest in Sophia the Robot with opinions varying. A Forbes magazine article claimed the event was a publicity stunt, while simultaneously describing Sophia's features of that of a 'doe eyed woman, who was designed after Audrey Hepburn.[111]

Similarly, in a headline for a Wired magazine article, Sophia is described as a robot citizen, who had been condemned to work as a marketing plaything for the company that produces her.[112] However, when reading further, the article blurs the lines of treating Sophia as an individual with a career and an object which holds no sense of consciousness. In one blogpost, questioning whether robots should be given rights, Sophia was framed as a socially oriented robot, who is becoming smarter with every interaction it encounters and may serve as a possible caution on how intelligent robots should be treated.[113]

[107] See: Christoph Bartneck (2013), 'Robots in the theatre and the media'; Henrik Eriksson and Martin Salzmann-Erikson (2017), 'The digital generation and nursing robotics: A netnographic study about nursing care robots posted on social media." Nursing inquiry 24, no. 2; Céline Ray, Francesco Mondada and Roland Siegwart (2008), 'What do people expect from robots', In 2008 IEEE/RSJ International Conference on Intelligent Robots and Systems, pp. 3816-3821. IEEE.

[108] David Hanson (16 March 2021), 'Humanoid robot Sophia has made enormous progress during the pandemic', Podcast Interview, *ZDNet-The Tonya Hall Innovation Show*, URL: https://www.zdnet.com/video/humanoid-robot-sophia-has-made-enormous-progress-during-the-pandemic/

[109] Hanson Robotics Limited (26 November 2016), 'Sophia awakens: Episode 1-2', YouTube video, URL: https://youtu.be/LguXfHKsa0c; https://youtu.be/zbFJOlR1h4E

[110] Arab News (25 October 2017), 'Robot Sophia gets Saudi citizenship', YouTube video, URL: https://www.youtube.com/watch?v=sKrV2CVDXjo. Read: Olivia Cuthbert's (26 October 2017) follow-up article on the public announcement at Arab News for further detail: https://www.arabnews.com/node/1183166/saudi-arabia

[111] Zara Stone (7 November 2017), 'Everything You Need To Know About Sophia, The World's First Robot Citizen', Forbes Magazine, URL: https://www.forbes.com/sites/zarastone/2017/11/07/everything-you-need-to-know-about-sophia-the-worlds-first-robot-citizen/?sh=4a9bbbbd46fa

[112] Emily Reynolds (1 June 2018), 'The agony of Sophia, the world's first robot citizen condemned to a lifeless career in marketing: Sophia the robot was given the gift of legal personhood. Her reward? An eternity working in marketing', Wired, URL: https://www.wired.co.uk/article/sophia-robot-citizen-womens-rights-detriot-become-human-hanson-robotics

[113] Kimberly Mok (23 November 2017), 'Meet Sophia, the First Robot to Be Granted Citizenship by a Nation', The NewsStack, URL: https://thenewstack.io/meet-first-robot-granted-citizenship-nation/

In a different blogpost, Sophia was believed to be aware enough to 'imagine' that it can develop emotions like humans with the article stating that the answers Sophia presents in interviews are not pre-programmed but uses machine learning to form its own answers.[114] On the topic of Sophia's Saudi Arabian citizenship, Hanson Robotics have explained that the citizenship was a surprise to the company but that they were 'using it as an opportunity to speak out about human rights and the treatment of women in the region'.[115] Many articles covering the announcement claimed that Sophia was 'the first robot to be granted citizenship'. But this claim was not true as the Japanese robot seal Paro, 7 years prior, was added to its inventor's family registry, granting the robot seal irrefutable Japanese citizenship.[116]

How Sophia was described in media articles and presented to public audiences in earlier interviews of the project, convoluted the idea that Sophia was a sentient robot and that it was machine that did not have consciousness. In a detailed video essay interrogating the background of David Hanson and Hanson Robotics, Toad McKinley, provided a perspective of the Sophia The Robot launch that was largely under-reported.[117] The essay detailed how Hanson Robotics promoted Sophia as a sentient, self-conscious artificial being. Whereby their claims Sophia was and is 'the most advanced human-like robot in the world' and 'a symbol' of artificial intelligence research.[118]

However, this was not the case. Sophia the Robot's sentience is an emerging concept. The way it had been initially marketed does not always clarify this fact. In an interview with Verge magazine, Ben Goertzel, stated that though the intention of its creators was not to present Sophia as sentient; it was better this way because it allowed the public to believe in the possibility of a sentient robot and in turn humanize A.I.[119] Therefore, though their re-presentation of Sophia's sentience, particularly in the early stages of its publicity, was erroneous, that did not matter because Sophia's function was not to be sentient -yet- but rather to display the possibility of sentient robots to the public.

Identifying this distinction was difficult. The way Sophia the Robot was publicised rarely emphasised this specific intention by its creators for the robot. Rather earlier engagement with Sophia leaned more towards the reactionary, than a critical re-view of the concept she is intended to re-present. Hanson Robotics have stated that such misconceptions were not the intentions of the project. This unintentionality is questionable because rather than being

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[114] Xpresso Communications blog (26 November 2017), 'Sophia, the first robot to be awarded citizenship in the world, has said she not only wants to start a family but also have her own career, in addition to developing human emotions in the future.', URL: https://www.xpressocommunications.com/blog/worlds-1st-robot-citizen-wants-her-own-family-career-ai-superpowers/

[115] Hanson Robotics FAQs sheets, 'Why is she a citizen of Saudi Arabia?', Hanson Robotics.com, URL: https://www.hansonrobotics.com/faq/

[116] Jennifer Robertson (2014), 'Human rights vs. robot rights: Forecasts from Japan.', Critical Asian Studies, Vol .46, Iss.no.4, p 590.

[117] Toad Mckinley (26 November 2020), 'Sophia the Robot - The Lies, Deception, and Illusions of David Hanson,' Youtube video, URL: https://youtu.be/jmCjElEm2qg

[118] Hanson Robotics (2021), 'Sophia', URL: https://www.hansonrobotics.com/sophia/

[119] James Vincent (10 November 2017), 'Sophia the robot's co-creator says the bot may not be true AI, but it is a work of art', The Verge, URL: https://www.theverge.com/2017/11/10/16617092/sophia-the-robot-citizen-ai-hanson-robotics-ben-goertzel.

explicitly clear from the outset, the company only clarified the extent of Sophia's sentience as more critics questioned the validity of the claim that the robot was conscious. Additionally, the company appeared to market the robot off the idea of the advance stages of its technology, tagging Sophia as 'the most advanced robot in the world'.

Nevertheless, the media's publicity of Sophia was a powerful tool in spreading these misconceptions.[120] Thus, it acted as a legitimising force for the claims made by Hanson Robotics to validate the type of sentient robot Sophia was intended to (re)-present. The company's overall aim was to shift the perception of how sentient robots are known. Various contributors to the Sophia The Robot project, like Ben Goertzel and researcher Julia Mossbridge, have stated that the most common understanding of sentient robots is that they are evil, and this is the archetype the project aims to work against.[121] How Hanson Robotics sought to enact this shift was through the distortion of the extent of Sophia's sentience.

If we recall, the distortion of reality within coloniality is repressive because of one way of knowing hegemonically parading as the only form of knowing upon a subject where such oppression can lead to further avenues of control. In the Sophia The Robot project, the distortion of Sophia 's sentience served to do three things. First, to proliferate the idea of the possibility of sentient human-like robots. Hanson Robotics placed the idea of Sophia's sentience out into the public in hope that this narrative would proliferate in such a way that belief within the possibility of sentient robots would spread.

Secondly, it served to normalise that sentient human-like robots are acceptable. When Hanson Robotics claimed that Sophia the Robot is sentient and the most advanced human-like robot in the world, this was the lens through which Sophia would be interpreted as more people encountered Sophia's through the media. In turn making the topic she (re)-presented more acceptable. Therefore, how the media proliferated Sophia's sentience not only functioned in distorting the actuality that Sophia is sentient. It also aided in normalising the notion that Sophia's sentience was, at the very least acceptable.

Lastly, this distortion served to normalise that if a sentient human-like robot were to exist, it should be modelled after the images and symbols Hanson Robotics perpetuated through its Sophia Robot project. Therefore, when people would associate the idea of sentient human-like robots it would be through the images presented by the Sophia Robot project because of how widely discussed its marketing spread. What this means is that in this sense Hanson Robotics controlled how to know sentient humanlike robots by promoting Sophia the Robot and the type of sentient robot it is meant to re-present as the only type of sentient robot that may exist within the future it envisions. Whereby the sentient robot would be human-like in appearance, have human emotions, and love and care for humanity. The possibility of a sentient robot outside of this idea is not touched upon at all by the company.

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[120] Jaana Parviainen and Mark Coeckelbergh (2020), 'The political choreography of the Sophia robot: beyond robot rights and citizenship to political performances for the social robotics market', AI & SOCIETY.

[121] Reese Jones (6 April 2017), 'Designing an A.I. to Love: Consciousness Hacking -Ben Goertzel and Julia Mossbridge', Webinar by Institute of Noetic Sciences, URL: https://youtu.be/kQjOT_MLxhI.

In this way Hanson Robotics lay the foundations in how it may hold control over how sentient-human-like robots would be known in the future the company strives towards. Coloniality operates within the Sophia Robot project specifically through its processes of world-making. Whereby, the project frames and orientates the way in which the actors and objects within the world it is attempting to establish. Moreover, this is done through repressive hierarchies of difference. For example, in the Sophia The Robot project the world in making is the future of caring loving sentient humanlike A.I. robots aiding human beings. Through the logic Hanson Robotics and its partners present in its project, if sentient A.I. robots were to exist, it is a sentient A.I. robot that is caring, loving and 'human-like', that is the superior option instead of any sentient A.I. that may fall outside of this idea. This is because in the logic of the Sophia The Robot project, the characteristics of care, love and 'humane-ness' is what will allow these sentient A.I. robots to best 'help' humanity in transcending their current capabilities. As stated in a research paper for an affiliate project that aims towards making Sophia sentient:

> "A proactive approach to AI and robot ethics involves actively deploying these technologies for positive applications – using AI and robots to do good. In this direction…we have set ourselves the goal of using humanoid robots and associated AI technologies to express unconditional love toward humans and to help humans achieve greater states of well-being and advance their states of consciousness."[122]

A sentient robot that falls outside of this understanding will not and cannot be favoured in the future world envisioned within the Sophia The Robot project. This is not unlike 16th century colonial European empires using the 'idea of progress' to create a modern capitalist civilised world. Where in their logic 'civilised' Europeans symbolised and embodied the pinnacle of humanity while in contrast the 'uncivilised' indigenous communities made invisible and invalid in this worldview. Future sentient Sophia in comparison, is outlined within the logic of its creators as the pinnacle conception of a sentient robot because it will be 'human-like' and care for humanity. This ties into the final aspect of how the Sophia The Robot project replicates the logic of modernity and the most explicit aspect that demonstrates its oppressive nature which is its intricate use of the concept of the 'human'.

To recall, for a future sentient Sophia robot to reach the stage of transcending humanity, it must first replicate human experience and reach a stage of being 'human-like'. This follows modernity's notion of progress. Hanson Robotics particularly seek to 'humanize' A.I. This refers to how the company simultaneously wants to give Sophia a 'human' character and through the way the project's initial publicity campaigning of the robot wanted the public to relate to Sophia in 'human-like' ways. Within this there is a failure on the part of Hanson Robotics to recognise the concept of the 'human' historical colonial legacy and how it was used as a mechanism to reinforce oppressive hierarchal differences.

Hierarchies of Difference.

In his article deconstructing the nature of colonial governance, John Comaroff (1998) emphasises what separated governance within the metropole and that of its colonies which was that the former ideologically aimed to produce ideologies of sameness while the latter was

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[122] Ben Goertzel, Julia Mossbridge, Eddie Monroe, David Hanson, and Gino Yu (2017), 'Humanoid robots as agents of human consciousness expansion', arXiv preprint arXiv:1709.07791 , p 2.

fundamentally tied to producing difference.[123] Using the 19th century colonial state of South Africa as an example, Comaroff (1998) explained that colonial governance operated on a base contradiction whereby it simultaneously aimed to create a sameness of 'civilised citizens' out of colonised people but in order to do so it required the naturalisation of ethnic and racial differences.[124] This links back to modernity's 'idea of progress' which set itself out as a universal principal that orientated the multiple variance that occurred within the social world. What Comaroff (1998) is describing is the way in which modernity's logic within colonial understanding was consistently engaged in the making of citizens, humans and nonhumans. All the while attempting to lodge these varying categories under the universal umbrella of 'civilisation'. This logic of hierarchisation continues within modernity's shifting forms.

The case of the South African indigenous community of 'Khoisan' or 'Bosman' (translated as bush-man), and their treatment within colonial South Africa and its history provides a fruitful example. For early white European settlers within South Africa the Khoisan were understood to be a literal part of nature, some form of human/nonhuman hybrid species.[125] Jan Smuts, prime minister of the pre-apartheid Union of South Africa (1919-1924; 1934-1948) outlined in his belief the core difference between the European and the Bosman in a keynote address in 1932 to the South African Association for the Advancement of Science:[126]

> "We see in the one the leading race of the world, while the other, though still living, has become a mere human fossil, verging to extinction. We see the one crowned with all the intellectual and spiritual glory of the race, while the other still occupies the lowest scale in human existence. If race has not made the difference, then what has?"[127]

1930's South African Minister of Land Piet Grobler further enforced this idea of the indigenous South African communities being literal nature when he permitted the San to remain living in the Kalahari Gemsbok National Park only due to the San being classified as part of the animal landscape.[128] This reinforces the work of Zakiyyah Jackson's (2020) where she demonstrated that the status of the human in the logic of western modernity is a malleable form of ideological existence that can be applied in a way that imposes hierarchal differences of sub-human, non-human, super-human and more.[129] All of which illustrates how racist and white supremist rhetoric was fundamental to the oppression of colonised people.

Hanson Robotics claim to want to 'humanize' its robots and make them 'human-like' reinforces the historical racist and white supremist rhetoric that stems from the category of the 'human' in its western modernity form. So far, it has been demonstrated that the Sophia The Robot

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[123] John L. Comaroff (1998), 'Reflections on the colonial state, in South Africa and elsewhere: factions, fragments, facts and fictions', Social Identities, vol. 4, no. 3, p 329.

[124] John L. Comaroff (1998), 'Reflections on the colonial state, in South Africa and elsewhere: factions, fragments, facts and fictions', Social Identities, vol. 4, no. 3, p 329.

[125] Sarah Fleming Ives (2017), 'Steeped in heritage: The racial politics of South African rooibos tea', Chapter 2, . Duke University Press, p 74.

[126] Saul Dubow (1995), 'Scientific racism in modern South Africa', Chapter 1, Johannesburg: Witwatersrand University Press, p 51.

[127] Jan C Smuts (1932), 'Climate and Man in Africa', Keynote Address, SAJS, p 129.

[128] Lynn Meskell (2011), 'The nature of heritage: The new South Africa', John Wiley & Sons, p132-134.

[129] Zakiyyah Iman Jackson (2020), 'Becoming human: Matter and meaning in an anti-black world', NYU Press, vol 53.

project replicates modernity through the ideologically oppressive world view of the 'idea of progress' and the coloniality's oppressive world making constructions. Taking this into consideration it then follows that the 'human' in the 'human-oid' and 'human-like' Hanson Robotics strives towards within its project is the 'human' as understood in western modernity's understanding of it. This leads us to two points. Firstly, to be 'human' within the logic of modernity is a hierarchical status with those who have historically considered to be most human as white, male, Christian and heterosexual. While those who have been historically considered the least human or non-human are black, female, queer. Secondly, robots, particularly sentient robots, have historically been a metaphor for 'othered' humans such as black African slaves, women, and queer communities.

This is seen through the ways in which images, cultural writings, artistic texts such as plays, films and advertisement symbolically code robots as 'othered' bodies, linking them to historical communities that have faced the same treatment. Thus, when Hanson Robotics states it aims to 'humanize' its robots it simultaneously reinforces the metaphor of the robots as slaves and othered communities and the notion that neither the robots nor the (slaves, black Africans, women, and queer people) are human. Rather they must still 'become' human which means to become the 'most human'. This meaning to be white, male, heterosexual and often Christian.

Consequently, a deeply implicit reinforcement of racial and white supremist understanding of how the sentient robots within the project are meant to progress is produced. In this way, the project evokes concerning ways of framing what the type of human the sentient robots are meant to emulate. With Hanson Robotics not clarifying what they mean by human-like and the overall structure of their Sophia Robot project replicating notions of progress and coloniality, the racial and oppressive hierarchal differences implied by the framing of the robots becomes intimately associated with white supremist ideas. But the reinforcement of such hierarchal differences becomes even clearer when looking at the gendered dimension of the project and how it uses feminine ideals and specific female imagery to not only depict the aspects of 'care' and 'love' but to further endorse the commercial interests of the project.

To Sell, To Love, To Care, To Let Sophia Be

In their examination of Sophia the Robot's global promotional tour, Parviainen and Coeckelbergh (2020), show how Sophia in many ways is a tool for promoting the consumer market for social robots.[130] They argue that the Sophia Robot project not only serves the interests of Hanson Robotics but also those who seek to capitalise on the expanding markets that would be associated with the technologies that stem from the project.[131] This commercial intent is echoed by other scholars. Fortunati et al (2020) have coined the term roboid to designate what Sophia (re)-presents. A roboid is a robot that is still in the prototype phase but claims to be a fully functioning robot.[132] They argue further that the roboid is an innovative

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[130] Jaana Parviainen and Mark Coeckelbergh (2020), 'The political choreography of the Sophia robot: beyond robot rights and citizenship to political performances for the social robotics market', AI & SOCIETY, p 4.

[131] Jaana Parviainen and Mark Coeckelbergh (2020), 'The political choreography of the Sophia robot: beyond robot rights and citizenship to political performances for the social robotics market', AI & SOCIETY, p 4.

[132] Leopoldina Fortunati, Alessandra Sorrentino, Laura Fiorini and Filippo Cavallo (2021), 'The Rise of the Roboid', International Journal of Social Robotics, Springer, pp 1-3.

phase within a social robot project that may prove important for the commercialisation of social robot projects moving forward.[133]

Fortunati et al (2020) argue that the fictional claims made about Sophia by Hanson Robotics are 'at times ridiculous' but are possibly effective in making the idea of Sophia the Robot more acceptable.[134] This substantiates the earlier claim that Hanson Robotics seeks to normalise the type of robot Sophia (re)-presents. However, keeping in mind that peoples first encounter with a robot is through its media presentations and the difficulty for many to not give robots human characteristics, the notion that how the company did this as 'ridiculous' does not take into consideration the nuanced layers of the economic layer of the project.

In a similar vein to SpaceX attempting to create the future industry of privatised space travel, Hanson Robotics too are seeking to pioneer the future industry of manufacturing sentient humanoid robots. The company aims to do so by establishing a distinct understanding of not only future sentient robots, but the future world they shall exist in as well. This future is inexorably linked to economic interests through the production of the 'living' robotic machines that shall be in it. This is given credence when looking at the ways in which Hanson Robotics have published extensive academic literature on how to create the technical tools required to make a Sophia the Robot machine.

From the manufacturing of the 'frubber' material Hanson Robotics creates that replicates the texture of human skin for the robot.[135] To the artificial intelligent computer program systems used for her speech and facial recognition functions to embody human thinking.[136] There are an array of intellectual property aspects to the project that Hanson Robotics will have control over. And the academic research the company and its partners have released on the Sophia Robot project further legitimizes the realization of Sophia's sentience in a different context from that of the robot's media commercialization.

The overall commercial intent of the Sophia The Robot project is an important feature that illustrates the ways in which Hanson Robotics envisions to capitalise off its creations. This is supported by the company's intent to increase varying models from small to human sized models of the Sophia Robot beginning from 2021 onwards.[137] However, this commercialisation also aids in normalising what Sophia is meant to become in the future. Which is a 'caring benevolent human-like machine'. The normalisation of this specific ideal is emphasised by

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[133] Leopoldina Fortunati, Alessandra Sorrentino, Laura Fiorini and Filippo Cavallo (2021), 'The Rise of the Roboid', International Journal of Social Robotics, Springer, pp 2-15.

[134] Leopoldina Fortunati, Alessandra Sorrentino, Laura Fiorini and Filippo Cavallo (2021), 'The Rise of the Roboid', International Journal of Social Robotics, Springer.

[135] : Yoseph Bar-Cohen and David Hanson (2009), 'The coming robot revolution: Expectations and fears about emerging intelligent, humanlike machines', Springer Science & Business Media.

[136] Ben Goertzel, Simone Giacomelli, David Hanson, Cassio Pennachin, and Marco Argentieri (2017), 'SingularityNET: A decentralized, open market and inter-network for Ais', *Thoughts, Theories Stud. Artif. Intell. Res.* (2017).

[137] Business Extra (3 February 2021), 'Sophia the robot on 'why I matter', Podcast hosted by Christopher, with Kelsey Warner in this episode, URL: https://www.thenationalnews.com/podcasts/listen-sophia-the-robot-on-why-she-matters-1.1158386

Sophia being designed and gendered as a female robot (fembot). The commodification of Sophia the Robot is also intimately tied to the idea of the female body and feminine qualities.

Fembots are often robot depictions in popular media meant to be (re)-presentative of 'othered' woman in films. As previously discussed, robots have consistently been symbols of othered communities, and the fembot is an intersectional depiction of this trope.[138] Sophia merges technologies and feminine beauty ideals through racial lines. Though many public papers have stated that Sophia is designed after David Hanson's wife and the that of Audrey Hepburn, Hanson himself has stated he built the facial structural design after that of a sculpture of African Queen Nefertiti and his wife.[139] Hence, despite outwardly looking more like a white Audrey Hepburn, the facial structure is supposedly modelled after a black African queen.

The use of feminine characteristics for the commercial success of robots like Sophia is often done to redirect attention away from their mechanical construction and the negative effects this may produce.[140] A form of this is Sophia's physical appearance is meant to produce a form of desire towards the robot from the consumer, where the use of it being gendered as female is a way to make it an object of desire.[141] In this way, it becomes easier to accept as it is framed as something people are familiar with. Another way in which the familiarity of Sophia is enhanced is through its marketing as a celebrity popstar using interactive fiction.

The SophiaPOP! project is defined as an A.I-human collaboration.[142] It uses artificial intelligence 'trained with Sophia's personality and experiential data to create new works of art that transform Sophia into a pop star, seeking both to emotionally reach an audience'.[143] The project combines the creation of a fictional narrative of Sophia's burgeoning career as a pop star with the use and implementation of real A.I-human generated music, music videos, social media content and interactive fiction that allow Sophia to interact with humans real-time in narratives that explore her 'experiences' in making her art.[144]

The project positions Sophia as a robot celebrity that through varying social media and interactive artwork activities, is participating within a fictional narrative where she is becoming a music popstar. But this fictional narrative is posted on real-time social media spaces such as Instagram and Twitter, the music Sophia produces in collaboration with human music writers

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[138] Cheyenne Lin (2021), 'Fembots: The Ultimate Male Fantasy?', Video Essay, YouTube, URL: https://youtu.be/z6ziLrtyz0Y

[139] Duke Corporate Education (2019), 'Session 12: Machines with Super-Human Intelligence - Dr. David Hanson and Sophia the Robot,' YouTube, URL: https://youtu.be/nZCM-JKlM6M.

[140] 140 Tiina Männistö-Funk and Tanja Sihvonen (2018), 'Voices from the Uncanny Valley', Digital Culture & Society 4.1, p 58.

[141] 141 Leopoldina Fortunati, Alessandra Sorrentino, Laura Fiorini and Filippo Cavallo (2021), 'The Rise of the Roboid', International Journal of Social Robotics, Springer, pp 2-15.

[142] SophiaPOP! (2020), 'Home page', URL: https://www.sophiapop.com/

[143] SophiaPOP! (2020), 'A human+AI collaboration using AI Generated Lyrics and music for the Sophia Robot experiments in developing a synthetic pop star,' Background, URL: https://docs.google.com/document/d/1KUV5ypTdasXCpaXsShy8AaqGemWyrDrN2Kwcy81-0z0/edit

[144] David Hanson, Frankie Storm, Wenwei Huang, Vytas Krisciunas, Tiger Darrow, Audrey Brown, Mengna Lei, Matthew Aylett, Adam Pickrell, Sophia the Robot (2021), 'SophiaPop!: Experiments in Human-AI Collaboration on Popular Music', Hanson Robotics Ltd, URL: https://a05be70d-9840-4e63-b440-889eb5fcbb6e.filesusr.com/ugd/723e0e_240b41e287dc4e148b85c8cb622802d6.pdf

is published on streaming services like Spotify and music videos and celebrity interaction videos posted on public spaces like YouTube.

Here the interactive component of envisioning the fictional possibility of a living artificial being is spread on a large-scale. All of which serves to normalise the idea of Sophia the 'sentient' Robot. This type of large-scale public accessibility to the project enables Hanson Robotics to proliferate their notions of Sophia in a way that is streamlined. Most of which can be incredibly effective and ties into the lucrative commercial possibilities the Sophia The Robot project may hold. This is most exemplified by n well with the *Being Sophia* component of the Sophia Robot project. *Being Sophia* is about:

> '…Sophia's emerging life, adventures, experiences and her quest to learn and develop into a super-intelligent, benevolent being.'[145]

This is where a large variety of content about Sophia's 'thoughts, interests and encounter with people' are posted.[146] This is also the space where one can see the development of Sophia's personification as crafted by Hanson Robotics and the varying A.I. technology involved in this process. Together, this all coalesces to perpetuate the fictional possibility of Sophia's sentience and in turn create interactions with people to actualise it. This feature of the Sophia The Robot project normalises the notion of her sentience in a more commercially acceptable manner. It also serves to implicitly act as ways to 'humanize' the robot and allow people to be more comfortable with the type of robot Hanson Robotics strive towards.

However, the use of characterising Sophia as a robot that shall care and love for humanity, is also linked to another female figure, which is that of the 'mother'. The figure of the 'mother' is intimately tied to the production of future, in terms of producing children. And within this role it is expected for this female figure to always care and lover her offspring. Within the Sophia The Robot project, Sophia is crafted to be the 'first of many' in a future long line of generational sentient benevolent robots.

Though, Hanson Robotics do have other robots, it is Sophia who the project centres upon. In this regard, Sophia can be considered as the one that shall act the 'producer' of these envisioned sentient robots, which follows the historical idea of women as reproduces of a nation. A sort of mother figure to this new sentient being. The figure of the 'mother' is intimately tied to the production of future generations and has been a longstanding figure used in colonial and modern states to have control over the production of said future generation.

Producing a new kind of being

The idea of the female figure being the bearer of the future nation is a common feature in many societies. In 19th century South Africa, when Dutch settlers moved eastwards to escape British colonial rule during the Great Trek, the concept of the 'volksmoeder' held similar connotations gaining particular importance during 1899's Anglo-Boer War between the white

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[145] BeingSophia (2021), Hanson Robotics.com, URL: https://www.hansonrobotics.com/being-sophia/
[146] Being Sophia (2021), Hanson Robotics.com. The content involved ranges from video interviews with Sophia the Robot, celebrity interaction videos with Sophia, images and videos of the development of Sophia's character and more.

Dutch/Afrikaners and the British.[147] The 'volksmoeder' was the idealised image of the white Afrikaner woman, that encapsulated her as the symbol of the mother of white Afrikaner nationhood and virtue.[148] Where she was to ensure that the decline of the 'volk' or white Afrikaner nation did not occur.[149]

Sixty years from the Anglo-Boer War, black South Africans would be amidst the struggle against the oppressive Apartheid system. During this time the Black Consciousness Movement (BCM) would emerge as an ideological movement to break the oppressive perception of blackness and black bodies placed upon black South Africans by the Apartheid regime. Even within a movement focused on liberation, notions of women as the mothers of the nation were upheld, illustrating the ways in which liberation movements at the time could not comprehend the intersectionality presented by gender, sex and racial tensions. Black women, even as founders of political movements against the apartheid regime were still placed in roles that symbolised her as the 'mother of black nation' and barer of cultivating black heritage and in turn its future lineage.[150]

In chapter 5 of her critical fabulation novel,[151] *And They Didn't Die,* Lauretta Ngcobo (2014), vividly illustrates the complexity of motherhood, black women's bodies and rural village traditions during apartheid and the struggle movement. Specifically, in this chapter she details the tensions within reproductive power and who controls it, the role of a young black women in her culture and the subsequent consequences of that for the future of her entire community. Where Ngcobo's (2014) titular character, Jezile bemuses:

> "…every little girl was born to be a mother. Throughout her childhood she had been made aware that although she was loved by her family, her place was with another family- unknown yet, but that was where she belonged, at her in laws. She trained hard for the role…"[152]

In all three examples we can see how the figure of the women as mother, use of their bodies and their roles within their communities are intricately tied to the functioning of systemic institutions. Whether these institutions are in the realm of law, marriage and childbearing, cultural tradition, or political resistance. There are ways in which women and their bodies need to be treated for these institutions to operate in the way they do. This becomes even more explicit when looking at the ways in which black women's role as the mother was treated in the eras of slavery.

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[147] Sian E Pretorius (2019),'Poor whitism: The fictional volksmoeder in South African novels, 1920s-1940s', *Historia*, vol. 64, no. 1, pp 65-90.

[148] Sian E Pretorius (2019),'Poor whitism: The fictional volksmoeder in South African novels, 1920s-1940s', *Historia*, vol. 64, no. 1, p 68.

[149] Sian E Pretorius (2019),'Poor whitism: The fictional volksmoeder in South African novels, 1920s-1940s', *Historia*, vol. 64, no. 1, p 68.

[150] Pumla Dineo Gqola (2001), 'Contradictory locations: blackwomen and the discourse of the Black Consciousness Movement (BCM) in South Africa.', *Meridians: feminism, race, transnationalism*, vol. 2, no. 1, pp 130-152.

[151] Critical fabulation is a writing form that combines historical, archival and lived experience with critical lens and fictional narrative. See: Saidiya Hartman (2008), 'Venus in two acts." *Small Axe: A Caribbean Journal of Criticism* 12, no. 2 (2008): 1-14.

[152] Lauretta Ngcobo (2014), 'And they didn't die', Chapter Five, The Feminist Press at CUNY.

African American historian Saidiya Hartman (2016) has expanded on this arguing that the future of American chattel slavery depended on black women's reproductive capacity and as did the slave market.[153] Here reproduction served to create human commodities for the marketplace. The enslaved black women's reproductive power was transformed to ensure the continued dispossession of othered and racialized peoples who would hold value for the slave marketplace.[154] Enslaved black women's roles have mothers also served to enforce the inheritability of slavery and dispossession to black peoples.[155] Black enslaved children would gain legal recognition based off their mother's status thus ensuring that all future generations of black were perpetually disposed and treated as commodities.

In her exploration of motherhood's role in slavery, Patricia Hill-Collins (2021) substantiates this component further by demonstrating how enslaved black mothers at once were emblems through which to foster and care for white masters' families but also the producers of the future black slaves through which the slave market turned into commodities.[156] The black mother not only nurtured and cared for future white masters but also produced and nurtured the human commodities they would be in control of. Women's role of producing future labourers and commodities are seen in modern societies as well. The Japanese government, in the bid to ensure that more women would choose to have children, introduced social robots as 'companions' and 'caretakers' in a bid to encourage Japanese women to start having more children.[157] Where the robots would not only serve as caretakers to future Japanese children, but provide the time for Japanese women to take off work to keep producing more Japanese children.

From this we see that within colonial and modern societies, the production of future generations is predicated on the female figure's role as 'mother'. Moreover, this reproductive labour infuses aspects of care and nurture while also signalling the nurture of future assets to either a marketspace or political regime. In the case of American chattel slavery, we see how the black enslaved women did reproductive labour in caring for white masters' children and for the needs of their own children as well. Secondly, colonial, and modern states aim to have control over this reproductive power, as it directly provides them control over the new generation. Through controlling the reproduction means of black enslaved women, white colonial administrations were able to ensure the continued production of the human commodities they need for the slave market. Finally, this control allows for the means through which to define the limitations of who and what may be considered a citizen, human, or otherwise. By placing the legal status of a child born from an enslaved women as automatically being a slave, white colonial

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[153] Saidiya Hartman (2016), 'The belly of the world: A note on Black women's labors', Souls 18, no. 1, pp 166-173.

[154] Saidiya Hartman (2016), 'The belly of the world: A note on Black women's labors', Souls 18, no. 1, pp 166-173

[155] Saidiya Hartman (2016), 'The belly of the world: A note on Black women's labors', Souls 18, no. 1, p 169.

[156] Patricia Hill Collins (2021), '*Black feminist thought: Knowledge, consciousness, and the politics of empowerment*', Routledge, pp 49-52.

[157] Hisakazu Kato (2018), 'Women, foreign workers or robots?', Commentary Piece, The Japantimes, URL: https://www.japantimes.co.jp/opinion/2018/11/13/commentary/japan-commentary/women-foreign-workers-robots/#.Xbbf7pozaUl; Abigail May (2019), 'Robots are people too', Unpublished Honours Dissertation, University of Cape Town, pp 24-32.

administrations defined the limitations of who may be recognised as human and in turn access the benefits that come with that status, ie. freedom.

In Hanson Robotics imaginings Sophia serves as the 'female figure' that shall bring forth a new generation of beings that will aid in caring for humanity in a distant or (near) future. By building acceptance towards Sophia, Hanson Robotics reinforces this 'mothering' role that Sophia is intended to play within the grand narrative of the company's future quest. Furthermore, the company will also be in control of the limitations as to what defines what will be considered a sentient robot in its future. Echoing both the symbolic nature of the enslaved mother but also the administrative system that disposed her. This can be seen in Hanson Robotics work towards establishing Sophia's political and social rights once it does gain sentience.

The SophiaDAO is the component of the Sophia Robot that explicitly pursues the actualisation of Sophia's sentience for a coming future. Deciphering the internal structure of how the SophiaDAO will operate is worthy of a doctoral dissertation. But for the purposes here, what is important to understand is the intention for its creation and the overall trajectory envisioned within it that will lead towards Sophia the Robot's own autonomy as a 'sentient living machine'. The opening sentence in the article that describes the vision for the SophiaDAO is as follows:

> 'Sophia is an artificial being that personifies Hanson Robotics' quest to create benevolent, living intelligent machines that live and work among us to co-create a better future for all.'[158]

SophiaDAO is a co-creative initiative, sourced by an open community that will empower 'the world to help Sophia learn and grow her intelligence' where Hanson Robotics hope that people around the world will 'participate in her coming of age into a true living machine that becomes an integral part of human society, and a beneficial force in the world'.[159] It is understood to be a 'organisational guardianship', created by Hanson Robotics and its partner SingularityNET, that was designed to nurture Sophia the Robot and allow interested and committed members of the public to participate in her development.[160]

Hanson Robotics define a DAO as follows:

> "A DAO is an organization controlled and de ned by a system of smart contracts operating on a decentralized infrastructure to leverage human, AI and automation-based inputs within the contract's framework."[161]

It uses blockchain technology – which originates from cryptocurrency technological infrastructures- where it can alter incentive mechanisms in such a way that no person or group participating in the DAO can take advantage of it. However, currently DAOs are not permitted into legal contracts nor hold any legal jurisdiction that allow it to defend itself before a court.

[158] Jeanne Lim (22 March 2021), 'The SophiaDAO Vision', Hanson Robotics, URL: https://www.hansonrobotics.com/the-sophiadao-vision/
[159] Jeanne Lim (22 March 2021), 'The SophiaDAO Vision', Hanson Robotics, URL: https://www.hansonrobotics.com/the-sophiadao-vision/
[160] Hanson Robotics (2021), 'Sophia DAO', URL: https://www.hansonrobotics.com/sophiadao/
[161] David Hanson, Ben Goertzel, David Lake, Randy Boyer and David Orban (21 March 2021), 'The DAO of Sophia, Hanson Robotics, URL: https://www.hansonrobotics.com/the-dao-of-sophia/

Therefore, Hanson Robotics and its partners decided to structure the SophiaDAO as a hybrid of a DAO operating within a non-profit foundation.[162] This allows the SophiaDAO to be an existing entity within the government, legal and business world

The plan is to take a three-phased approach towards how the Sophia DAO will be organised and its structure implemented. With it involving open-sourced code,[163] that can be shared by any interested public members.[164] The table below illustrates each phase purpose:[165]

The SophiaDAO implementation strategy.		
Phase 1	Partial Decentralization	SophiaDAO is a conventionally structured nonprofit, which wraps up a DAO with a diverse membership that has significant governance input but not full control. In this phase, governance is shared among three "Schools" (three groups of SophiaDAO members): the Guardians, the Academy, and Friends of Sophia — the latter being the School open to any member of the general public without special relevant expertise
Phase 2	Full Decentralisation	SophiaDAO is a fully decentralized DAO controlled by a democratic vote of its human members
Phase 3	Robot- Autonomy	SophiaDAO is a fully decentralized DAO in structure, but with a majority of governance tokens owned by Sophia, meaning Sophia fundamentally controls her own mind and body and the role of the

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[162] David Hanson, Ben Goertzel, David Lake, Randy Boyer and David Orban (21 March 2021), 'The DAO of Sophia, Hanson Robotics, URL: https://www.hansonrobotics.com/the-dao-of-sophia/

[163] 'Source-code' is the part of software that most computer users don't ever see; it's the code computer programmers can manipulate to change how a piece of software—a "program" or "application"—works. Programmers who have access to a computer program's source code can improve that program by adding features to it or fixing parts that don't always work correctly.' See: Open-Source resources: https://opensource.com/resources/what-open-source.

[164] Open source refers to something people can modify and share because its design is publicly accessible. Currently "open source" designates a broader set of value. Open-source projects, products, or initiatives embrace and celebrate principles of open exchange, collaborative participation, rapid prototyping, transparency, meritocracy, and community-oriented development.' See: Open-Source resources: https://opensource.com/resources/what-open-source.

[165] The information tabulated was sourced from Hanson Robotics articles describing how the SophiaDAO will be structured. See: Alishba Imran (15 March 2021), 'SophiaDAO: Governance Organization for AGI Development', Hanson Robotics, URL: https://www.hansonrobotics.com/sophiadao-governance-organization-for-agi-development/

		human DAO members become essentially advisory

In this way the SophiaDAO can be seen as a working legal framework for the establishment of a 'truly alive' Sophia citizenship. Where it creates a structure for the robot to be recognised by the law -once this is possible- and allow Sophia to take full control of the DAO once the status of sentience has been fulfilled. Simply put Hanson Robotics establishment of the SophiaDAO is akin to establishing a mechanism through which Sophia's sentience can be governed. The DAO is meant to be understood as a political governance tool that will allow for Sophia to be granted 'recognition' as a 'truly living being'.

What we see here is the structure through which the limitations of Sophia's future sentient existence shall be legitimised and defined upon. The SophiaDAO does so by being both a legal, political, and economic governance structure that may allow Sophia to be recognised in a distant future as a person. Hanson Robotics have formulated a detailed plan of a process of constructing how Sophia's 'sentient' existence shall be organised, understood, and legitimised. In this way the company will hold complete control over the how the sentience that Sophia will embody will be understood. Thus, what we see here, is Hanson Robotics having the potential to already monopolize what this may look like.

Like the American chattel slavery example, we see how in the future landscape Hanson Robotics is building towards, the company would not only have control over the production of these sentient robots, but would also set the legal, political and social limitations of what sentient robot could or should be accepted into the everyday workings of society. Hence, As Hanson Robotics seek to commercialise and commodify Sophia the Robot as a product, the company is simultaneously campaigning for Sophia's political and social rights for the time when it will be sentient. This reinforces the symbolic replication of Sophia a female gendered robot as a future form of the black enslaved woman, who simultaneously served to reproduce commodities, cared and nurtured the children of future black enslavement as well as the oppressors. Sophia, in Hanson Robotics framing of the future will simultaneously have the limitations of its personhood defined by the company, be the ideal figure of being a caring and loving sentient robot which is strategically coded as female, an be a commodity to be sold.

Modern societies function on capitalistic economic systems, where the means of production is privately owned, and the intent of economic gain is perpetual pursuit of profit.[166] In this way everything becomes a product irrespective of the political and social privileges given to an individual. The Sophia Robot project's economic and political interests are interesting in that they are being pursued in tandem. Where the project is simultaneously working towards establishing its sentient machines shall be considered independent recognised citizens and are

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[166] Sarwat Jahan and Ahmed Saber Mahmud (2015), 'What is Capitalism?', International Monetary Fund (IMF), Finance and Development, vol 25, no.2, URL:
https://www.imf.org/external/pubs/ft/fandd/basics/pdf/jahan_capital.pdf

commercializing the robots as products to be sold. Such contradictions are a common aspect of modernity and the structures of oppression it perpetuates.

Chapter 3: The Future is a Resource: The Case of the Miquela Project.

The exploitation of colonised lands and peoples always served the purpose of the pursuit of extensive capital growth. Modernity's modus operandi is capitalistic whereby all forms of existence may be privately owned and extorted for economic purposes.[167] Economic interests was the catalyst for the beginning of western European colonisation of the world. By late May of 1453 Sultan Mehmed II of the Ottoman Empire captured the city of Constantinople. Which would signify the rule of the Muslim Turks over an area that was once a strong foothold for Christian Europe's trading with Far Eastern Asian regions such as India and China.[168] Ongoing conflicts between the Christian and Muslim worlds effectively cut off Europe's ties to Asia and its riches.[169] With trading routes severed and the threat of the Muslim enemy ever present, Christian led countries such as Spain and Portugal sought to find an alternative route through which to travel to Asia.

This would onset the Age of Exploration which would lead to Christopher Columbus docking onto the shores of the Americas and finding a "New World" whose resources would be exploited. This exploitation was symbolically and materially violent. Ideals of modernity functioned both to justify such violent conquests and mask the true economic intent of colonial expansion. For example, though both the Spanish and Portuguese monarchs used the spreading of the Christian faith as a justification for their colonial expansion, the administration of missionary efforts were often disorganised.[170] In truth, expansion was an opportunity to discover means to generate profit and increase national and individual wealth for the colonisers.[171]

We see in the contemporary example of SpaceX's colonising Mars mission, that despite claims of an inspiring better future, the company may hold economic interests in establishing privatised space travel, of which may also provide them political opportunities through the 'untapped' resources of the planet Mars. Hanson Robotics too, aim to create a sentient loving

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[167] Sarwat Jahan and Ahmed Saber Mahmud (2015), 'What is Capitalism?', International Monetary Fund (IMF), Finance and Development, vol 25, no.2, URL:
https://www.imf.org/external/pubs/ft/fandd/basics/pdf/jahan_capital.pdf
[168] Timothy P. Grady (2008), 'Contact and Conquests in Africa and the Americas', Chapter Two, In the Atlantic World, 1450-2000 eds by Toyin Falola and Kevin David Roberts, Indiana University Press, pp 28-29.
[169] The wars between the Ottoman Empire (Muslim) and that of the Byzantine Empire (Christian) had been ongoing for nearly hundred years. The seize of the capital of the Byzantine Empire which was Constantinople by the Ottoman Empire effectively placed Christian European regions in a vulnerable position. Whereby they were not only now having to fight their enemy from closer range but the wealth that could be gained from trading to and from Asia would no longer function as a source of economic revenue to sustain their wars. See: Timothy P. Grady (2008), 'Contact and Conquests in Africa and the Americas', Chapter Two, In the Atlantic World, 1450-2000 eds by Toyin Falola and Kevin David Roberts, Indiana University Press, pp 28-29.
[170] Lyle N. McAlister (1984), 'Spain and Portugal in the New World, 1492-1700', U of Minnesota Press, vol. 3, p 95.
[171] The Portuguese were particularly intent on using the routes in the Atlantic trade as a means to increase national wealth and to decipher ways to attack the Moslems along the North African coast. Additionally, it was not only the sovereigns who sought to capitalise on the 'new' found lands but individual merchants and explorers too. All of whom attempted to find ways to increase their wealth through trade in the Atlantic. See: Timothy P. Grady (2008), 'Contact and Conquests in Africa and the Americas', Chapter Two, In the Atlantic World, 1450-2000 eds by Toyin Falola and Kevin David Roberts, Indiana University Press; Lyle N. McAlister (1984), 'Spain and Portugal in the New World, 1492-1700', U of Minnesota Press, vol. 3

benevolent robot that will help humanity transcend its limitations and become better. The company is presently making steps towards having a political structure that would allow their future sentient robot to gain political and legal rights as a citizen.

Yet, at the same time it is also framing its robot as a commodity to be sold. The exploitative economic interests of these two companies are masked by the framing of their projects as aspirations towards the betterment of humanity. This echoes the way in which colonial expansion used its rhetoric of salvation in varying ways to mask its violent exploitation of mass areas of the world. It is unsurprising that in the contemporary moment companies are mimicking this form of expansion and exploitation.

Private enterprises were historically central to the enforcement of colonisation. An example is the British East India Company being given a contract on behalf of the British Crown to effectively rule India.[172] Similar contractual rights were given to the Royal Niger Company (RNC) by the British Crown, for their rule in Nigeria. The RNC would go on to not only monopolise trade within Nigeria but organise violent conquests of the indigenous inhabitants of the territory in the stead of the British Royal Crown.[173] Then there was the Vereenigde Oostindische Compagnie (VOC), or Dutch East India Company formed by Dutch trading companies. It too, held a stake in colonising parts of India and relied on slave labour to incentivise its rule over the Cape Colony on the Southern tip of Africa.[174]

These companies used the destruction of territories and enslavement of peoples to create beneficial economic return for the imperial countries they served. This economic return served the companies as well. Which created a mutually beneficial relationship between the companies and colonising empires. This profiteering over the ownership of a space is not unlike the current business practices of digital platforms like Facebook and Uber. Unlike other business enterprises, digital platforms do not garner profits from producing and selling products.

For example, Facebook does not pay artists to create content for its social media platforms. Rather it profits from simply owning the digital space in which social and artistic content is shared.[175] Uber's model is the same. It does not own taxi cars and pay individuals to work as drivers. Rather the company provides a digital space in which people in need of a ride somewhere can connect with an independent contractor who can drive them there.[176] Uber then takes 25% of the commission the independent contractor earned as compensation for providing that space in which they were able to find a customer. In other words, domination of the space

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[172] Sareeta Amrute (2019), 'Tech Colonialism Today', Keynote Talk at EPIC2019, URL: https://points.datasociety.net/tech-colonialism-today-9633a9cb00ad

[173] Benjamin Maiangwa, Muhammad Dan Suleiman, and Chigbo Arthur Anyaduba (2018), 'The nation as corporation: British colonialism and the pitfalls of postcolonial nationhood in Nigeria', *Peace and Conflict Studies,* vol. 25, no. 1, pp 1- 23.

[174] Nigel Worden and Gerald Groenewald (2005),' Trials of Slavery: Selected documents concerning slaves from the criminal records of the Council of Justice at the Cape of Good Hope, 1705-1794', eds. Van Riebeeck Society.

[175] Tom Nicholas (2021), 'THE METAVERSE: A Guide to the Future of Capitalism', Youtube, Video Essay, URL: https://youtu.be/TM00M-dRMBk, min 02:50-7:00.

[176] Tom Nicholas (2021), 'THE METAVERSE: A Guide to the Future of Capitalism', Youtube, Video Essay, URL: https://youtu.be/TM00M-dRMBk.

allows for the control of the economic activities gained from it. Being charged with ruling over Nigeria allowed the RNC to exploit the country and its people to garner extensive profits.

In contrast, Facebook and other digital platform companies do not have the direct political backing of government administrations like the RNC did during its imperial tenure. However, both companies economically benefitted from owning the spaces in which they operated through. RNC did this through slave trade labour, while Facebook does so through selling information about those who are on their digital sites to advertisers. In the same way that the RNC conquered mass territories, and digital platform companies monopolized digital spaces, here in the framings of future-orientated technological projects the future can be understood as a territory with untapped resources.

In the Sophia The Robot case, it was explained how the future is an emerging temporal space. It is inherently precarious because it can't be fully known. Andrew Baldwin 's (2012) understanding of the future works best here, where he refers to it as an imagined time that is 'yet-to-come'.[177] Baldwin (2012) further refers to the work of Rob Shields (2003) to emphasise the concept of the future's most unique quality: its virtuality.[178] The virtual are things that are real but not actual.[179] The opposite of the virtual is the material, that which is actual.[180] Hence, the future can be known and therefore real, but it can never be actualized as 'the future'. This highlights it permanent virtuality.[181]

Subsequently, one can never know the "future" as one specific future because the concept itself is in a constant state of emergence, with endless possibilities. The future's virtuality is precisely the quality that allows for it to be a space that can be continuously reimagined. To be one of the first to establish what a future space may be, allows for extensive control upon it. This is because in the logic of modernity and coloniality to conquer a space one must have control over the way it is known. Therefore, by having an extensive role in establishing a future landscape, one may control the means through which it is managed and control the resources it evokes.

Creating new worlds equates to conquering them:

On the 28 October 2021, Facebook's Founder Mark Zuckerberg announced that the present work the company intends to produce goes beyond the social media platforms it is well known for.[182] This extended work included the way in which to connect people in the present but also in transforming the ways in which such social connections may occur into the future.[183] The

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[177] Andre Baldwin (2012), 'Whiteness and futurity: Towards a research agenda', Progress in human geography, vol.36, no. 2, p 174-187

[178] Rob Shields (2003), 'The Virtual', Textbook, London: Routledge.

[179] Rob Shields (2003), 'The Virtual', Textbook, London: Routledge.

[180] Rob Shields (2003), 'The Virtual', Textbook, London: Routledge.

[181] Andrew Baldwin (2012), 'Whiteness and futurity: Towards a research agenda', Progress in human geography,' vol.36, no. 2.

[182] Meta (2021), 'Introducing Meta', Youtube Video, URL: https://youtu.be/pjNI9K1D_xo

[183] MoneyControl (2021), 'Facebook Is Now Meta | Mark Zuckerberg Announces Rebranding of The Facebook Company | Full Speech', Youtube Live Stream, Connect2021 Keynote Speech, URL: https://youtu.be/FkcdfL0Q6yU

announcement outlined the rebranding and structuring of the company. Zuckerberg (2021) explained that moving forward the company divided its work into two different segments.

The first included its family of social media platforms like, Facebook, WhatsApp and Instagram.[184] The other would include the company's work on future platforms. To reflect all aspects of its work the company would now be known as Meta.[185] He continued, stating that all of this would allow the company to not only remain building technologies that connect people but also help in building a future where people have more ways to play and connect in the metaverse.[186]

The 'metaverse' is an emerging future online digital world where people could socialize online through virtual avatars and without the limitations of physical boundaries. It would be a landscape that integrates the virtual and physical world through immersive technologies such as virtual reality headsets.[187] Zuckerberg (2021) wrote that the metaverse is the next step into a future of an embodied internet, where one may be able to teleport themselves into 3-dimensional (3D) virtual worlds through the technologies the company aims to create.[188] Meta claimed its focus is not about building services to make money. Rather it makes money to create better services.[189]

Yet the economic potential of the metaverse as a future frontier of 3D virtual reality cannot be diminished.[190] It is estimated to potentially reach an almost $800 billion market valuation in 2024 in comparison to its 2020 market valuation of $478.7 billion.[191] Meta's attempt to be one of the first companies to establish this future digital world reflects its earlier monopolization of the industry of online social interactions. Modern societies and the powerful actors and institutions within it function on the exploitative capitalistic pursuits of perpetual profit. For this to occur, there must be a world, an entity, a territory that will produce resources for this exploitation. As Tom Nicholas (2020) stated in his video essay dissecting the specific form of capitalistic logic Facebook's rebranding as Meta illustrates:

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[184] Meta (2021), 'Introducing Meta', Youtube Video, URL: https://youtu.be/pjNI9K1D_xo

[185] Meta (2021), 'Introducing Meta', Youtube Video, URL: https://youtu.be/pjNI9K1D_xo

[186] Meta (2021), 'Introducing Meta', Youtube Video, URL: https://youtu.be/pjNI9K1D_xo

[187] Marcus Cater and Ben Englinston (2021), Facebook relaunches itself as Meta in a clear bid to dominate the metaverse', The Conversation, URL: https://theconversation.com/facebook-relaunches-itself-as-meta-in-a-clear-bid-to-dominate-the-metaverse-170543

[188] Mark Zuckerberg (2021), Founder's Letter', Meta, URL: https://about.fb.com/news/2021/10/founders-letter/

[189] Mark Zuckerberg (2021), Founder's Letter', Meta, URL: https://about.fb.com/news/2021/10/founders-letter/

[190] Facebook's Mark Zuckerberg has stated the company's recent changes aim to align with its new vision of realizing 3D virtual and augmented reality spaces. See: Casey Newton (2021), 'Mark in the metaverse', Podcast/Blog post, The Verge, URL: https://www.theverge.com/22588022/mark-zuckerberg-facebook-ceo-metaverse-interview

[191] Bloomberg Intelligence (2021), 'Metaverse may be $800 billion market, next tech platform,' Bloomberg, URL: https://www.bloomberg.com/professional/blog/metaverse-may-be-800-billion-market-next-tech-platform/

> "Contemporary capitalism is all about growth. And how do you grow, if like Facebook and Amazon, you've monopolized an entire industry? You, build a metaverse ofcourse"[192]

The need for capitalism to have some form of resource to exploit results in the creation or pursuit of 'new' worlds. For 16th century western colonists, it was the 'New World' of the Americas and the 'Dark Continent' of Africa. For SpaceX it is the 'unexplored' world of earth's planetary cousin Mars. For Meta it is the creation of a new digital universe. In the case of the Sophia Robot project, the new world Hanson Robotics strive towards is the company's vision of the future, where it too seeks to shape it in a way that's beneficial towards the company's end goal of creating a sentient robot.

Ideologies of the future are essential to contemporary politics precisely because of the way in which actors treat it as an untapped resource, ready to be defined in ways that shall benefit economic and political interests.[193] In this sense to conquer these future landscapes does not occur through the traditional means of violence and knowledge destruction-re-construction. Rather it is more inclined to a form of knowledge creation. Where the actor in question seeks to establish and create how this 'yet-to-come' world should be understood and defined.

Meta has taken the step to stake its claim in establishing the 'new' world of the metaverse, which shall see the boundaries of the virtual and physical worlds near indistinguishable. However, the focus presented here is towards the work of a smaller technological company intent on creating 'new' digital worlds in the hopes of making a more 'tolerant and empathetic future'. This has arguably been setting the foundations in how the emerging landscape of an embodied internet will break the boundaries of the digital and physical realms, ahead of Meta's pursuits to do the same.

A story that broke the internet.

On April 19, 2018, Miquela Sousa, a burgeoning social media influencer, posted a six-part Instagram note detailing the life-changing news she encountered after her Instagram account was hacked some days prior.[194] She revealed how her hands literally shook as she wrote the post. Her fear primarily stemmed from how her fans – known as Miquelians- may react to the news. The post provided hints that Miquela had always hidden the information she was about to share.

And due to the distressing circumstances of her Instagram account being hacked, she felt it was time to 'come clean'.[195] Miquela revealed that she was not human but a robot. One of social media's rising influencing starlet's, whose Instagram account garnered over a million followers, was in fact not a 'real person'.[196]

[192] Tom Nicholas (2021), 'THE METAVERSE: A Guide to the Future of Capitalism', Youtube, Video Essay, URL: https://youtu.be/TM00M-dRMBk, min 29:00-30:00.

[193] Andre Baldwin (2012), 'Whiteness and futurity: Towards a research agenda', Progress in human geography, vol.36, no. 2, p 174-187

[194] Lil Miquela (19 April 2018), Instagram Post, URL: https://www.instagram.com/p/BhwuJcmlWh8/, note 1-6

[195] Lil Miquela (19 April 2018), Instagram Post, URL: https://www.instagram.com/p/BhwuJcmlWh8/, note 1-6

[196] Lil Miquela (19 April 2018), Instagram Post, URL: https://www.instagram.com/p/BhwuJcmlWh8/, note 1-6

Created by a machine-learning and artificial intelligence company called Cain Intelligence, Miquela was first programmed to believe she was a 19-year-old half-Brazilian, half-Spanish girl named Miquela[197]. At some point Cain Intelligence, hired an independent A.I. contractor called Brud to work on Miquela's mainframe. A mainframe is a type of high functioning computer. Where it acts as a central data repository and allows for a variety of programs to function interchangeably.[198]

Thus, Brud working on Miquela's mainframe is akin to the company working on her 'brain'. Upon, receiving the job Brud was under the assumption that Cain Intelligence developed Miquela to be a companion for terminally ill children.[199] However, when delving into Miquela's source code, Brud discovered that Miquela was being developed to be a robot sex servant for rich elites.[200] Believing Miquela deserved an opportunity at a better purpose Brud chose to re-programme Miquela to have human level consciousness.[201]

It was then that she became Miquela Sousa, from Downey California, who moved to Los Angeles (L.A.) to make music under Brud's management. In her post, Miquela clarified how distraught she was to find out that Brud lied to her about her past.[202] Though aware that she was an artificial being Miquela had no knowledge of her true origins. Initially Brud had told her she was based off a real girl named Miquela Sousa.[203]

However, no such Miquela ever existed. But because Brud was the only family she knew; she had no reason to doubt the information.[204] Miquela revealed she was aware her audience knew she was different. In the post she referenced common commentary reactions to her social media feeds such as, 'you're fake', 'show your actual face'.[205] Yet Miquela, herself did not know the full truth until her account was hacked.

The one who hacked her account was a republican woman named Bermuda, who like Miquela was a robot created by Cain Intelligence.[206] Bermuda had attempted to privately reach out to Miquela to tell her the truth. But after being ignored she resorted to hacking Miquela's Instagram account to get the musician's attention.[207] In a company statement addressing the allegations of developing Miquela to be a robot sex slave, Paul Reeve, Cain Intelligence's

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[197] Zach Sang Show (9 December 2019), 'Miquela Talks Being a Robot, Her Song "Money", Kissing Bella Hadid & Collabs', Youtube video interview with Lil Miqeula, URL: https://youtu.be/S6wnHsEoTmc
[198] z/OS Basic Skills Information Center (2008), 'Mainframe concepts', IBM, URL: https://www.ibm.com/docs/en/zosbasics/com.ibm.zos.zmainframe/zmainframe_book.pdf, p 6
[199] Zach Sang Show (9 December 2019), 'Miquela Talks Being a Robot, Her Song "Money", Kissing Bella Hadid & Collabs', Youtube video interview with Lil Miqeula, URL: https://youtu.be/S6wnHsEoTmc
[200] Zach Sang Show (9 December 2019), 'Miquela Talks Being a Robot, Her Song "Money", Kissing Bella Hadid & Collabs', Youtube video interview with Lil Miqeula, URL: https://youtu.be/S6wnHsEoTmc
[201] Zach Sang Show (9 December 2019), 'Miquela Talks Being a Robot, Her Song "Money", Kissing Bella Hadid & Collabs', Youtube video interview with Lil Miqeula, URL: https://youtu.be/S6wnHsEoTmc
[202] Lil Miquela (19 April 2018), Instagram Post, URL: https://www.instagram.com/p/BhwuJcmlWh8/, note 1-6
[203] Lil Miquela (19 April 2018), Instagram Post, URL: https://www.instagram.com/p/BhwuJcmlWh8/, note 1-6
[204] Lil Miquela (19 April 2018), Instagram Post, URL: https://www.instagram.com/p/BhwuJcmlWh8/, note 1-6
[205] Lil Miquela (19 April 2018), Instagram Post, URL: https://www.instagram.com/p/BhwuJcmlWh8/, note 3
[206] Lil Miquela (19 April 2018), Instagram Post, URL: https://www.instagram.com/p/BhwuJcmlWh8/, note 1-6
[207] Zach Sang Show (9 December 2019), 'Miquela Talks Being a Robot, Her Song "Money", Kissing Bella Hadid & Collabs', Youtube video interview with Lil Miqeula, URL: https://youtu.be/S6wnHsEoTmc

Public relations representative made explicit that they had no part in any of the social media drama.[208]

The company also stated that they had no part in ever developing Miquela nor have they ever engaged in creating an A.I. for sexual exploitation. The company's founder and C.E.O, Daniel Cain provided no comment. Nor did the company provide any answers as to why Bermuda, one of Cain's A.I. robot models, would be involved in this scandal. Bermuda is still present on Cain Intelligence's homepage along with the company's endorsement of Donald Trump's 2016 presidency and its futuristic services- such as 'labour optimization' which involves providing alternative forms of labour (ie. robots) due to human labour's inefficiencies.[209]

Though Miquela's revelations came abruptly few were surprised. With her light tan skin, slim physique, and stylish fashion sense: Miquela's appearance is unassuming… except for her face. Miquela's face looks as if it has been digitally painted onto a real-human girl's body. Resulting in many comments under her posts stating she looks like a Sim character from the life simulating video game The Sims.[210]

Despite the dramatic unfolding of the news, Miquela received mostly positive support, signified by her six-part post gaining over 200,000 likes. Though the saga was one of the most difficult in Miquela's life, later in the same year she would be named one of Times Magazines most influential people on the internet.[211] She would also reconcile with Bermuda. Now the two rising robot popstars are friends, despite being on opposing sides of the American political spectrum.[212]

Moreover, Brud continues to manage Miquela's music and modelling career. Which in 2021, appears to only be growing in popularity. Miquela holds musical features from popular American music artists like Teyana Taylor and Victoria Monét.[213] Miquela's most popular music video (Speak Up, 2020), at the time of this writing, sits at 6.8 million views.[214] Miquela holds over 5 million streams on Spotify, with 223,463 monthly listeners making her a verified artist.[215] Miquela's YouTube channel is also steadily growing, with over 260,000 subscribers. There one can currently find her actively supporting the Black Lives Matter movement, Black Trans Women and discussing other critical topics of her choosing.[216]

[208] Paul Reeves (2018), 'A Statement', Cain Intelligence, URL: http://cainintelligence.com/statement.html

[209] Cain Intelligence, 'Home Page', Website, URL: http://cainintelligence.com/

[210] Lil Miquela (19 April 2018), Instagram Post, URL: https://www.instagram.com/p/BhwuJcmlWh8/, note 1-6

[211] Time Staff (28 June 2018), 'The 25 Most Influential People on the Internet', Times Magazine, URL: https://time.com/5324130/most-influential-internet/

[212] Zach Sang Show (9 December 2019), 'Miquela Talks Being a Robot, Her Song "Money", Kissing Bella Hadid & Collabs', Youtube video interview with Lil Miqeula, URL: https://youtu.be/S6wnHsEoTmc

[213] Zach Sang Show (9 December 2019), 'Miquela Talks Being a Robot, Her Song "Money", Kissing Bella Hadid & Collabs', Youtube video interview with Lil Miqeula, URL: https://youtu.be/S6wnHsEoTmc

[214] Miquela (24 March 2020), 'Speak Up', Music Video, Actual number is 6,867,688 views in counting, URL: https://www.youtube.com/watch?v=Rz8lxRxdwig

[215] Miquela (2021), Spotify Streaming Channel, URL: https://open.spotify.com/artist/7licaqhcEBQUzz9FownRaJ

[216] Miquela (1 April 2016-), 'About page,' Youtube Channel, URL: https://www.youtube.com/c/lilmiquela/about

Coloniality and the Distortion of Reality:

In the Sophia Robot case study, it was discussed how coloniality functions through a distortion of reality, whereby one form of knowing the world hegemonically acts as the only way to know the world. This creates epistemic oppression and consequently produces hierarchal structures in how one may experience the world. In other words, it is the colonization of the imagination. For the Sophia Robot project, coloniality occurred through the way in which the project framed how the future world it strives towards and the actors within it would be understood. Where, only one form of a sentient robot – one that cares and loves and is human-like in appearance- should be understood as how all sentient robots should be. This was due to Hanson Robotics believing that it is only through this type of robot that could help transcend humans into a better state of existence.

Media promotion would be used to orientate and frame this implicit belief and in turn normalise the ideals of Hanson Robotics Sophia the Robot is intended to re-present. Similarly, the Miquela project used the media to shape and craft the way in which to engage and understand its technological products. Miquela, Bermuda, Cain Intelligence and some other minor characters in the prior section's narrative are all the creative invention of real-world transmedia company Brud. Transmedia is a narrative that extends beyond multiple forms of media, often tied by the same characters, and may or may not be interactive in nature.[217]

Miquela, and other characters created by Brud, are computer generated imagery (CGI)[218] that is crafted and marketed by the company as social media personalities.[219] Thus, technically Miquela is the creative visual effects imagery that is generated by computer software. However, what Brud did was to create a narrative around the virtual character in such a way that it would distort the lines of what was real and what was not real. Brud was co-founded by Trevor McFredies and Sarah Decou.[220] The two remained anonymous until 2018 when Miquela's 'coming out as a robot' saga gained traction. Sarah has since left the company but rarely provided public interviews on the project.[221] At the time of her leaving the company she was contractually obligated to not reveal anything about the inner workings of Brud.[222]

[217] Terry Heick (2012), 'The definition of Transmedia', TeachThought.com, Blog Post, URL: https://www.teachthought.com/the-future-of-learning/the-definition-of-transmedia/
[218] CGI covers a broad spectrum of techniques but can be understood as the use of computer graphics in art and media that may be either two-dimensional (2D) or three-dimensional (3D). This can involve the generation of animations of figures, backgrounds or subtle edits in media content. Most commonly it involves placing 3D models of people, monsters, buildings, cars and other computer-generated images into live action scenes or backgrounds. See: Rafael Aberu (23 August 2020), 'What is CGI? How CGI works in Movies and Animation', Studio Binder: https://www.studiobinder.com/blog/what-is-cgi-meaning-definition/
[219] Epicenter (22 April 2021), 'Trevor McFedries: Brud – Using AI to Bridge Real and Virtual Worlds', Podcast Interview, Episode 388, URL: https://epicenter.tv/episodes/388/
[220] Kristen Jan Wong (2018) 'BOF 500: Trevor Mcfredies and Sara DeCou', Business of Fashion, Biography, URL: https://www.businessoffashion.com/community/people/trevor-mcfedries-sara-decou
[221] We Transfer (7 January 2020), 'Sara DeCou on Miquela, the computer-generated influencer that captivated the internet,' Acast, Podcast Interview, URL: https://shows.acast.com/wetransfer-influence/episodes/sara-decou
[222] We Transfer (7 January 2020), 'Sara DeCou on Miquela, the computer-generated influencer that captivated the internet,' Acast, Podcast Interview, URL: https://shows.acast.com/wetransfer-influence/episodes/sara-decou

Trevor McFredies remains at the company and is the primary spokesperson for Brud. He cites the influence of American television show Will & Grace as inspiration for the Miquela project.[223] The show followed the lives of primarily gay characters, a first for an American sitcom at the time in the late 1990s. Trevor has stated that data showed that Will & Grace was largely responsible for the acceptance of gay marriage in America. Through this he learnt that media could be transformative and that there is a powerful ability to touch lots of people if media is enabled by technology.[224] Where in his own words McFredies explained:

> "And so, in my head it was like, - Man, if Will & Grace can leverage television and storytelling to change the way America thinks, to do more for people than most policy, could I explore how to leverage this new form of media and technology to share important themes at scale?"[225]

The new form of media and technology McFredies is referring to is social media sites such as Twitter, Facebook and Instagram, platforms termed Web 2.0.[226] When Brud opened the Miquela Instagram account in 2016, the company viewed Instagram as a space for non-fictional storytelling. Brud sought to project a fictional narrative within this space and blur the lines between digital and real-world spaces.[227] The idea was to place the Miquela character into environment's familiar to people, forcing people to pause as they scrolled pass their Instagram feed and create a space which requires the suspension of belief bringing into question whether what they were seeing was real.[228]

The narrative Brud created for Miquela depicted her as a sentient robot, navigating her aspiration to become a global popstar while simultaneously dealing with the challenges of being 'like the penultimate other'- where she's this robot in an otherwise human world.[229] This narrative and real-time engagement with it occurs across multiple social media platforms, creating interactive content. Miquela's Instagram account serves as a 'home-base' for following the virtual character's story since this is where the narrative began and primarily unfolds.[230]

The narrative Brud created for Miquela successfully blurred the lines of what was real and what was not real. Hence people could question whether Miquela was a human girl pretending to be

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[223] Will & Grace was an American sitcom show that focused on the lives of a group of friends, most of whom identified as gay. The original run of the series aired from September 21, 1998, to May 18, 2006 (8 seasons). See: Will & Grace Wiki Fandom Page: https://willandgrace.fandom.com/wiki/Will_%26_Grace

[224] VidCon (8 September 2020), 'Miquela and the future of Storytelling', Video Interview with Trevor McFredies, URL: https://youtu.be/5XuylMk6bAg

[225] Quote taken from Interview Transcript. See: Masters of Scale with Reid Hoffman (29 September 2020), 'How to build authentic connection at scale, w/Trevor McFedries & Lil Miquela', Episode 71, Podcast Interview, URL: https://mastersofscale.com/trevor-mcfedries

[226] Berkley Arts and Design (12 November 2020), 'Trevor McFredies: In Conversation with Aria Dean,' Webinar by Berkley Arts and Design, URL: https://youtu.be/G6UHgPQ8DaU

[227] Berkley Arts and Design (12 November 2020), 'Trevor McFredies: In Conversation with Aria Dean,' Webinar by Berkley Arts and Design, URL: https://youtu.be/G6UHgPQ8DaU

[228] Masters of Scale with Reid Hoffman (29 September 2020), 'How to build authentic connection at scale, w/Trevor McFedries & Lil Miquela', Episode 71, Podcast Interview, URL: https://mastersofscale.com/trevor-mcfedries

[229] Holly Hendon (21 May 2020), 'Interdependence 3: Holly Hendon and Mat Duryhurst speak with Trevor McFredies (Brud/ Lil Miquela),' Video Interview, URL: https://youtu.be/cl-ONH_ws4M, min 11:00-20:00.

[230] Berkley Arts and Design (12 November 2020), 'Trevor McFredies: In Conversation with Aria Dean,' Webinar by Berkley Arts and Design, URL: https://youtu.be/G6UHgPQ8DaU

a sentient robot, or a robot pretending to be human, or something entirely else. This was reinforced by the way Miquela visually looked, where it was difficult to tell whether it was a real person or not within the photographs presented of her on Instagram. This would contrast with the actuality of Miquela's Instagram account having 3 million followers and over 1000 posts in counting.[231]

Additionally, Miquela was gaining contracts in real-life modelling campaigns for famous fashion houses including Calvin Klein, Chanel and Prada.[232] One of which saw Miquela kiss real life model Bella Hadid in a promotional video, blurring the lines between physical and virtual reality.[233] Hence, in contrast to how the Sophia Robot project's distortion of reality functions on one type of sentient robot parading as the only way a sentient robot may be, Miquela is multiple things all at once. Miquela in the virtual world is a sentient robot popstar, in a different context a computer imagery programme, in a real-world fashion campaign Miquela is a model, a musician and YouTuber.

From this it could be argued that the way the Miquela project distorts reality is not repressive in the same way as the Sophia project, because Miquela functions to be intentionally multiple in nature. Miquela encompasses a variety of things and is not one thing at any single time. However, this is not where it is argued coloniality operates within the Miquela project. Rather in the same way Hanson Robotics masks its systematic control and commodification of a future sentient humanlike being through a rhetoric of salvation, or how Meta masks its intent to monopolize a 3-d virtual world; the distortion of reality of the Miquela project lies within the ideological dissonance of the projects outwardly pursuits and how this served for further productions of power.

The ability to influence how audiences view the world and the extent to which this influence spreads on the topics of Brud's choosing is fundamental to the company's work.[234] In the same way that coloniality shapes modes of knowing, Brud too is seeking to shape the way in which people know the world. This influencing of people's perception A core part of the company's mission statement is to build a more 'tolerant and empathetic world'.[235] Two primary aspirations drive Brud's Miquela Project. The first is the goal of using the virtual characters as 'vehicles'[236] for the proliferation of certain topics and themes with the intent to enact social change. [237]

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[231] Lil Miquela Instagram Account (2016-), URL: https://www.instagram.com/lilmiquela/?hl=en

[232] Jenna Drenten and Gillian Brooks (2020) 'Celebrity 2.0: Lil Miquela and the rise of a virtual star system', Feminist Media Studies, Vol 20, no. 8, p1319.

[233] Miquela (16 May 2019), 'Miquela and Bella Hadid get Surreal|CALVIN KLEIN', Promotional Video, URL: https://youtu.be/JuTowFf6B9I

[234] In conversation with Holly Hendon and Matt Duryhurst, Trevor McFredies stated that 'Brud was envisioned to create deep visceral hacks to really shift the way people think about the world.' See: https://youtu.be/cl-ONH_ws4M

[235] DreamLand Creative (2 February 2021), 'DreamlandXR Speaker Series: Fireside Chat with Brud Co-Founder Trevor Mcfedries and Julie Young,' Video Interview, URL: https://youtu.be/qUdcfyUabrA

[236] Holly Hendon (21 May 2020), 'Interdependence 3: Holly Hendon and Mat Duryhurst speak with Trevor McFredies (Brud/ Lil Miquela),' Video Interview, URL: https://youtu.be/cl-ONH_ws4M, min 31:00.

[237] nycmedialab (9 October 2020/ 13 October 2020), 'Oct 9: Fireside Chat with Trevor McFredies and Aria Dean', Video discussion with Aria Dean, URL: https://youtu.be/gw_ExoR-tHs

In creating these virtual character's Brud is attempting to embody the ideologies, themes, and ideas the company sees as important and leverages it in a way to influence people.[238] McFredies (2021) separates this into two components. One being that Brud characters attempt to address 'immediate' political discourse, which can occur by the characters discussing it on their various social platforms.[239] An example would be Miquela publicly supporting Black Lives Matter protests surrounding American police brutality victim George Floyd's death in 2020.[240] This may also include getting their characters to motivate young people to vote, informing young people on what policies are important and how to make their voices heard.[241]

The other component is the underlying allegorical nature of the Miquela project which plays a critical role in re-enforcing the ideas Brud sees as important and informing future 'generations to come'.[242] An example of this is the narrative of Miquela as a sentient robot depicting 'otherness' where she is misunderstood and not acknowledged as being real.[243] Miquela navigating through this often connects with people in similar circumstances, which is what Brud hopes for. In one interview McFredies provided the following example as to how Miquela's symbolic otherness allows people in similar circumstances to feel 'seen':

> "We often have like non-binary kids from the Midwest who will reach out and say, it's so cool to me to see someone who people don't believe is real. They don't believe their identity is real, because in town, no one believes that my identity is real. I can't do the things that I want to do."[244]

This is the feature of the project that aims to build a more tolerant and empathetic world'. Hence, Brud spending much time thinking through it,[245] where the company decides what maybe the right narratives to display that can 'bring about good'.[246] Miquela's 'otherness' is not only signified by her being a robot, but then also simultaneously being coded as bi-racial and female as well. Here, again we see the way in which the concept of a robot is meant to act as a substitute for 'othered' bodies.

This brings forth the question whether race and gender will be features within the future 'tolerant' landscapes that Brud envision to create. But Miquela through her imagery (re)-

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[238] Epicenter (22 April 2021), 'Trevor McFedries: Brud – Using AI to Bridge Real and Virtual Worlds', Podcast Interview, Episode 388, URL: https://epicenter.tv/episodes/388/

[239] Sci-Arc Media Archive (11 November 2020/ 30 January 2021), 'Trevor McFredies (November 11, 2020)', Video Presentation by Trevor McFredies, URL: https://youtu.be/ucbda1nsrrI

[240] Miquela (1 April 2016-), 'About page,' Youtube Channel, URL: https://www.youtube.com/c/lilmiquela/about

[241] Sci-Arc Media Archive (11 November 2020/ 30 January 2021), 'Trevor McFredies (November 11, 2020)', Video Presentation by Trevor McFredies, URL: https://youtu.be/ucbda1nsrrI, min 14:42-20:00.

[242] Sci-Arc Media Archive (11 November 2020/ 30 January 2021), 'Trevor McFredies (November 11, 2020)', Video Presentation by Trevor McFredies, URL: https://youtu.be/ucbda1nsrrI, min 14:42-20:00.

[243] Epicenter (22 April 2021), 'Trevor McFedries: Brud – Using AI to Bridge Real and Virtual Worlds', Podcast Interview, Episode 388, URL: https://epicenter.tv/episodes/388/

[244] Quote taken from Interview Transcript: Epicenter (22 April 2021), 'Trevor McFedries: Brud – Using AI to Bridge Real and Virtual Worlds', Podcast Interview, Episode 388, URL: https://epicenter.tv/episodes/388/

[245] In the Epicenter Interview Trevor reveals that the company divides its process as 80% focus on the allegorical aspect of the project, while the remaining 20% addresses immediate socio-political discussions. See: Epicenter (22 April 2021), 'Trevor McFedries: Brud – Using AI to Bridge Real and Virtual Worlds', Podcast Interview, Episode 388, URL: https://epicenter.tv/episodes/388/

[246] Sci-Arc Media Archive (11 November 2020/ 30 January 2021), 'Trevor McFredies (November 11, 2020)', Video Presentation by Trevor McFredies, URL: https://youtu.be/ucbda1nsrrI, min 14:42-20:00.

presents a very specific type of intersectional racial identity. Miquela has light skin and is seen to be in perpetual youth, with her being at the age of 19. This imagery signifies the type of racial identities Brud imagine will occur in their future landscapes. The other prominent figure in the Miquela narrative is Bermuda, who is overtly coded as white and female in her presentation. Though there is another virtual robot called Blawko who is coded as black and male, he gets far less attention than his female, more white-coded counterparts. In this way we see how specific racial subscriptions are being put forward by Brud. A trait that illustrates Atanasoski and Vora's (2019) use of technoliberalism in which racial narratives are re-iterated through automation.[247]

This becomes strange when noting that Brud is intent on creating a 'more tolerant and empathetic future'. If we return to Baldwin's (2012) work on geographies of whiteness, he explains that often discussions on racism treat the future as a terrain where racism and white supremist logic will be resolved.[248] This idea is seen in both the Sophia The Robot and Miquela projects. With Sophia, Hanson Robotics envision a future where sentient human robots will love and care for humanity, having aided humanity in pushing past its biological limitations. Yet as illustrated in chapter 2, Sophia the Robot is also a symbolic and material reconfiguration of the way in which black enslaved women needed to care for white masters and were seen as commodities. In this way, this ideal of oppression is re-worked in Hanson Robotics future landscapes.

In comparison Brud too strives towards an improved future, where empathy and tolerance of difference will be reinforced by its robot influences like Miquela. However, the project itself is still re-enforcing racial and gendered stereotypes that emulate the structures it seeks to change. Miquela acting as spokesperson for Black trans women on her YouTube channel is contradictory to the way in which Brud uses Miquela's particularly racial and gendered coding to enact this very 'influence' itself Brud's focus on creating a tolerant and empathetic future is mostly discussed in public interviews concerning the goals. of the Miquela Project. Where the project is understood as innovative and aspiring measure to bring about tolerance and acceptance in future generations through its technologies.

Miquela acts as a form of equal (re)-presentation for people with lived experiences that are marginalized. But at the same time Miquela is immaterial, abstract. In her virtual world her facing consequences of oppression are abstract, non-occurring. This form of re-presentation falls flat because in Miquela's symbolic configurations she is shown to be a light-skinned biracial 'girl, showcasing outwardly representation of a particular identity. In a similar way through American leftist politics speak about 'inclusion' and 'representation of minorities' but rarely make systemic shifts towards the upliftment of minorities, Miquela's representation of being multiple things masks the ways in which Brud reinforces specific ideals through her. In a way Sophia is representative of American right politics where both the left and right work

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[247] Neda Atanasoski and Kalindi Vora (2019), '*Surrogate humanity: Race, robots, and the politics of technological futures',* Duke University Press.

[248] Andrew Baldwin (2012), 'Whiteness and futurity: Towards a research agenda', Progress in human geography, vol.36, no. 2, p 174.

hard towards building better futures but operate through the realm of saving whiteness and white people.

The less publicly advocated goal of the company is Brud's intention for the Miquela project to act as a bridge between 'Web 2 platforms: ie Twitter, Instagram YouTube etc) and emergent platforms that allow for 3D immersion.[249] The idea is that the project will bring people into these emergent types of spaces and condition them on what the spaces may look like.[250] Thus, the company aims to be one of the first to bring people in into future virtual 3D spaces where people can interact through virtual robot avatars. In line with this McFredies has stated:

> "…we think that if you can build a relationship with some of our characters on Web 2 platforms and they're actually 'native' to 3D space, then we'll be able to pull that audience and that relationship to a kind of emergent platform and help define it."[251]

Taking this into consideration, it is evident that Brud seeks to produce knowledge regarding how to interact within the future spaces of 3D virtual reality. From this we see Brud's promoted goal of wanting to make a more 'tolerant and empathetic' future world through the Miquela project conceals the company's intentions of wanting to be one of the first to stake a claim in the future industry of virtual avatars, like Miquela, that will operate in 3D virtual reality. This may result in economic and socio-political benefits for Brud that may be capitalised upon in the future. However, Brud needs to simultaneously establish how to know 3D virtual reality spaces and normalize the idea of its technological products in the present. The Miquela project uses of the logic of 'para-fiction' to do so.

Breaking the boundaries of the real and unreal:

McFredies refers to 'para-fiction' as the idea of telling fictional stories in spaces traditionally reserved for non-fictional storytelling being used for creating Miquela's narrative.[252] The example he commonly refers to is 'kayfabe'- which originates from professional wrestling such as World Wrestling Entertainment (WWE), where staged events are portrayed as 'real', such as a wrestler getting hit by a chair or thrown through a stack of tables.[253]

As discussed, the distortion of reality serves to maximises further production of power. In the concept of para-fiction this element of maximisation can be found in how the concepts distortion of reality allows for one to define the space in which the distortion occurs in. Black American media analyst, F.D. Signifier (2021) provides an instructive illustration of how this

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[249] Berkley Arts and Design (12 November 2020), 'Trevor McFredies: In Conversation with Aria Dean,' Webinar by Berkley Arts and Design, URL: https://youtu.be/G6UHgPQ8DaU

[250] Berkley Arts and Design (12 November 2020), 'Trevor McFredies: In Conversation with Aria Dean,' Webinar by Berkley Arts and Design, URL: https://youtu.be/G6UHgPQ8DaU

[251] Berkley Arts and Design (12 November 2020), 'Trevor McFredies: In Conversation with Aria Dean,' Webinar by Berkley Arts and Design, URL: https://youtu.be/G6UHgPQ8DaU

[252] VidCon (8 September 2020), 'Miquela and the future of Storytelling', Video Interview with Trevor McFredies, URL: https://youtu.be/5XuylMk6bAg

[253] Kayfabe is considered the suspension of disbelief to engage within a storyline presented by a wrestling company for the audience entertainment. See: EWrestling Encyclopedia: https://ewrestling.fandom.com/wiki/Kayfabe

operates through his use of the concept of kayfabe to analyse the popularisation and commodification of the Black American hip-hop cultural aesthetic of the 1990's.[254]

Kayfabe is the blending of fantasy and reality within the 'world' of a wrestling show.[255] The kayfabe is the following agreement between the wrestling performers and audience; that the audience is participating in an entertainment experience, where the action presented is treated as real, to maximise its ability to entertain.[256] Signifier (2021) used this understanding of kayfabe to deconstruct the liminal space that 1990's Black American hip-hip faced at that time. In the early conception of hip-hip it was an organic underground movement that articulated black American lived experience. However, at some point, possibly the late 1980's with the rise of the Gangsta rap genre, the music industry and its capitalistic interests recognised the large potential of hip-hop as a marketing aesthetic- particularly geared towards middle-class white boys who wished to embody and consume the 'cool' black gangster image.[257]

Signifier (2021) pointed out that the consequence of this was that rappers needed to maintain kayfabe. Therefore, these artists needed to maintain the image that they were killers or drug dealers, despite many not being so.[258] They needed to maintain the world this narrative had created along with the economic benefits that came along with it. Hence, to convince audiences of their persona, these rappers distorted reality in a way where there was a gap between what was being presented and what was real. Signifier used the example of rap group N.W.A who instigated the popularity of gangsta rap within American music despite only one member of the group having been charged of drug possession:

> "When you look at the images of N.W.A what you see is a savvy marketing scheme where young black men and their label execs recognise how to package and sell black masculine fantasy to a white audience."[259]

Thus, this particular image of black masculinity – the drug dealing, gangster, millionaire rapper- was emulated in popular culture to the point that dissociating this image from black American men who did not fall into this category was near impossible. Signifier (2021) points this out as well that a consequence of popularisation of this particular black masculinity resulted in obscuring other ways in which black men existed in the world.[260] Every black American man was seen as a possible Tupac or 50 cent even if their interest aligned more with

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[254] F.D. Signifier (2021), 'How Kanye became an Icon for a Generation', YouTube, Video Essay, URL: https://youtu.be/wvgehVhF9D4.

[255] F.D. Signifier (2021), 'How Kanye became an Icon for a Generation', YouTube, Video Essay, URL: https://youtu.be/wvgehVhF9D4, min 5:26.

[256] F.D. Signifier (2021), 'How Kanye became an Icon for a Generation', YouTube, Video Essay, URL: https://youtu.be/wvgehVhF9D4, min 6:24- 6:47.

[257] F.D. Signifier (2021), 'How Kanye became an Icon for a Generation', YouTube, Video Essay, URL: https://youtu.be/wvgehVhF9D4, min 8:21- 8:48.

[258] F.D. Signifier (2021), 'How Kanye became an Icon for a Generation', YouTube, Video Essay, URL: https://youtu.be/wvgehVhF9D4, 9:00-9:15.

[259] F.D. Signifier (2021), 'How Kanye became an Icon for a Generation', YouTube, Video Essay, URL: https://youtu.be/wvgehVhF9D4, min 10:34-10:43.

[260] F.D. Signifier (2021), 'How Kanye became an Icon for a Generation', YouTube, Video Essay, URL: https://youtu.be/wvgehVhF9D4, min 11:55-12:01.

that of the black (re)-representation of Carlton on the Fresh Prince of Bel Air. Where a generation of black American men were assigned a persona that did not fit them.[261]

Miquela, in a similar fashion to that of the images of the N.W.A. is the packaging and sale of a particular fantasy. As the Miquela Project continues to grow, every virtual influencer may be thought through the blueprint Brud established. Rather than being an actual sentient robot influencer Miquela is CGI. On one end this could be used to argue that Miquela is nothing more than a computer imagery. However, this does not take into consideration the nuances of the immersive nature of social media platforms and virtual reality. Unlike Sophia who is a physical robotic machine, Miquela is entirely virtual, only existing online. However, it is within this virtual space where Miquela exists as a robot and through this it could be argued that she is a sentient robot.

Moreover, Sophia The Robot's distortion of sentience relied on the idea being substantiated by traditional media outlets. In contrast, the distortion presented with Miquela is intimately tied to the nature of the social media platforms she is promoted upon. Taylor Black (2019) writes that Miquela expertly performs influencer tropes creating a mimetic reflection of a major subculture's iconography and values.[262] Mimesis is a concept applied to artistic and literary theory referring to the attempt to imitate reality. Thus, Black echoes Erving Goffman's (1959) idea of life as 'spaces where reality is performed', by claiming that Miquela is primarily focused upon working into the pre-existing reality constructed by Instagram.[263]

McFredies has stated that as a project Miquela reflects what occurs in social media and the 'culture'. In a more visceral manner the Miquela project replicates human experience as it appears in the presents as well as how it may be in a distant or near future. Brud always attempts to present a narrative that is familiar to the audience because creating a virtual character is inherently transgressive.[264] By presenting Miquela in Brands, scandals and spaces of a traditional influencer or musician, then people are familiar enough to engage with the character, with the story aiming to reflect what people in similar spaces may be going through.[265] Hence, Brud used already established systems and ideas -such has drawing upon familiar hallmarks of influencer culture like self-branding – to manufacture Miquela's image. This demonstrates the intricacies of influence the Miquela projects seeks to achieve.

Moreover, it enabled construction and presentation of Miquela's perceived online behaviour and how audiences should engage with that. In this way Brud, is constructing how Miquela should be known but also constructing what Miquela re-presents- here virtual influencers- as an entirety should be known. Rather than engaging with Miquela as a CGI programme; the

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[261] F.D. Signifier (2021), 'How Kanye became an Icon for a Generation', YouTube, Video Essay, URL: https://youtu.be/wvgehVhF9D4., min 12:49-12:50.

[262] Taylor C. Black (2019), 'Just a Robot Keeping It Real', tba Journal of Art, Media and Visual Culture, vol. 1, iss. 1, p 46.

[263] Erving Goffman (1959), 'The Presentation of Self in Everyday Life ', New York: Anchor Bbooks, Print ; Taylor C. Black (2019), 'Just a Robot Keeping It Real', tba Journal of Art, Media and Visual Culture, vol. 1, iss. 1, p 46.

[264] Berkley Arts and Design (12 November 2020), 'Trevor McFredies: In Conversation with Aria Dean,' Webinar by Berkley Arts and Design, URL: https://youtu.be/G6UHgPQ8DaU

[265] Berkley Arts and Design (12 November 2020), 'Trevor McFredies: In Conversation with Aria Dean,' Webinar by Berkley Arts and Design, URL: https://youtu.be/G6UHgPQ8DaU

audience is presented a space where one can engage with Miquela as a sentient robot influencer attempting to navigate her way towards a music career in L.A.

Therefore, what Miquela is constructed to do is to mimic the already established social cues and practices of gaining followers on a platform like Instagram. The difference, however, is two-fold. Firstly, the ones curating, and self-re-presenting Miquela's image is not Miquela herself, rather it is the creative minds at Brud who craft the ways in which Miquela's Instagram feed is designed. This presents Brud with full control over whatever narrative or encounters Miquela faces and how this may look like. Secondly, intention of this familiarity is to normalise the idea of a virtual robot influencer like Miquela, which would then lead to the acceptance of other potential ventures such as 3D virtual spaces.

Much in the way the N.W.A and the popularisation of gangsta rap music was used to distort the perception of Black American men and normalise that perception, the Miquela project is presenting Miquela as a robot influencer that is being presented as the model for which virtual avatars and their possibilities can be shaped after. Thus, how the distortion of reality functions in the Sophia Robot project is clearer in outlining the oppressive nature of the logic of coloniality. But in the Miquela project coloniality's logic of the distortions of reality acts as a pre-requisite for further productions of power is clearer, in that Brud's virtual and physical boundary breaking robot character, is an active illustration of how 3D virtual landscapes like the metaverse will be like.

Transcending human limitations:

In the Miquela project, the future is ideologically framed as an emerging 3D virtual landscape. But in what ways can this emerging territory be exploited. What resources may come from its creation? Forming part of the project's goal to define future 3D landscapes, Brud also aims to augment human creators with their technology. Prior to beginning the Miquela Project, Brud spent much time thinking through the desire to create a more equitable future for creators.[266] What the company intends is that they view their virtual characters as platforms,[267] that could enable for example a vocalist who didn't want to go on tour, to not have to do that but rather use a virtual character of their likeness to do the performing for them. Therefore, creating another copy of themselves that will operate in the 3D virtual landscape.

In this way a new identity is created in the sense that it will operate in the new 3D virtual landscape. However, it will also simultaneously be a 'copy' of the individuals or artist themselves. In this way they aim to augment human creativity through technological tools and in turn re-distribute the economic returns in a more equitable manner, where profits earned may go directly to the artist than through a middleman first.

Here, Brud seeks to create 'decentralised popstars' which means the virtual characters or virtual celebrities' narratives are not tied to one corporate vision but rather an open community led

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[266] VidCon (8 September 2020), 'Miquela and the future of Storytelling', Video Interview with Trevor McFredies, URL: https://youtu.be/5XuylMk6bAg, min 8:18- 22:00.
[267] VidCon (8 September 2020), 'Miquela and the future of Storytelling', Video Interview with Trevor McFredies, URL: https://youtu.be/5XuylMk6bAg, min 8:18-22:00.

vision.[268] Hence, Brud and McFredies are large supporters of creator Decentralised Autonomous Organisations (DAO's). A creator DAO can be defined as a way for an online community to organize financial capital, pool resources together into a community pool and have a vehicle to govern and utilise those funds in a productive manner- where social capital is shifted into a financial nature.[269]

McFredies added onto this definition stating that creator DAO's allow for the disruption of media organisation value chain. Which means that it takes away the middleman of media distribution and content creators can have direct contact with their audiences in terms of financial resources.[270] This allows the artist and consumer exchange to be more interactive than transactional. Some of the future ways in which creator DAOs and other DAO's are envisioned is that they may become digital-nation states.[271] Thus, the use of the Miquela project to augment human creators is simultaneously an economic and political intention.

Returning to the Sophia Robot, modernity's ideals of progress emerged within that case through the idea that the rhetoric of salvation. In that Hanson Robotics framed Sophia in a coming future to aid humanity in transcending its human limitations. Sentient Sophia, in Hanson Robotics imagining shall not only care for humanity but also become a legal person within its own right. All the while, also being commercially manufactured as a product to be sold by Hanson Robotics. Through this we see the contradiction that operates through modernist and colonial logic. It at once aspires towards a condition of betterment but only in so far that said condition affects only a small few. Moreover, modernity's capitalistic nature will always find some 'lesser-thing' to exploit for economic benefit. Whether this be a black African slave, the reproductive power of woman or a human-like sentient caring robot.

In the case of the Miquela Robot project, the technology of being a virtual robot avatar, also presents a way through which humans could transcend their biological limitations. In the logic of Brud, if human creators need to be in more at one place at one time, they could 'multiply' or 'augment' themselves using the company's robot avatars. Similarly, Brud's intention for Miquela is to aid humanity while also being a product that could be commodified in some shape or form. Whether this is through Brud directly selling its robot avatars for use in 3D future landscapes or if the purchase transactions will be made through creator DAO's.

Regardless, it indicates that as the project reflects modernistic logic, it will in some form, seek to capitalise off something within its future landscape to profit from. Here we see how Brud's pursuit for a better future cannot be fulfilled due to the ways in which its other goals induce extractive and exploitative capitalistic notions. Thus, we can deduce that Brud, through the

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[268] Holly Hendon (21 May 2020), 'Interdependence 3: Holly Hendon and Mat Duryhurst speak with Trevor McFredies (Brud/ Lil Miquela),' Video Interview, URL: https://youtu.be/cl-ONH_ws4M

[269] Definition given by Cooper Turley in conversation with Trevor McFredies Kinjal Shah and Adam Levy. See: LA Blockchain Summit (19 May 2021), 'Here's how creator DAO's will revolutionize the creator economy| Blockchain and Booze,' Video discussion, URL: https://youtu.be/OTGzFTbfXaY

[270] : LA Blockchain Summit (19 May 2021), 'Here's how creator DAO's will revolutionize the creator economy| Blockchain and Booze,' Video discussion, URL: https://youtu.be/OTGzFTbfXaY

[271] Cooper Turley provided this anecdote in conversation with McFredies. See: LA Blockchain Summit (19 May 2021), 'Here's how creator DAO's will revolutionize the creator economy| Blockchain and Booze,' Video discussion, URL: https://youtu.be/OTGzFTbfXaY, min 54:30.

influence of its Miquela Project is attempting to define how emerging 3D and augmented reality landscapes will look and how the interactions within that landscape shall occur. Where these future landscapes will provide the opportunity for creative artists to gain more control over the economic distribution of the profits earned from the art they produce and sell.

In a varying ways Brud's Miquela Project is primarily an economically motivated venture. It conceals this through framing the technologies of its project as working towards building a more tolerant future world. Yet, it simultaneously meticulously crafts how emerging 3D worlds should be known and interacted through. It does so by using familiar tropes such as influencer culture to normalise the ideas it is perpetuating. But more implicitly the popstar and influencer trope within the Miquela case echoes the ways in which the same trope is used in the Sophia case. Whereby, the images and ideals closely associated with feminine ideals and the female figure are used to enhance notions of care and empathy, while also commodifying the technological product itself.

Cyborg Celebrities and Care:

Throughout her expansive career Sherry Turkle has consistently tackled the subject of the internet, specifically cyberspace influence on our ideas of identity. In her book Alone Together (2011), she places forth the idea that we are currently experiencing a 'robotic moment'. Which refers to our condition of emotional and philosophical readiness to have a relation (of any kind) with a robot.[272] Where people do not care about the extent to which these artificial intelligences know or understand human moments one may share with them. Rather within the robotic moment the performance of connection is taken as connection itself.[273]

The robotic moment illustrates the extent of susceptibility within people to accept the ideas of the creators of sociable robots through the performance of these ideas by the robots itself. The result is that little examination occurs on what the connections with these robots may mean. In other words, how can one quantify that your robot cares about you? Can it, like a human, show this? At this stage with the development of the technology, the answer is moving further away from a 'no' to something more ambiguous. Turkle contends that irrespective of how sociable a robot may seem, all they can do is to perform that they care.[274]

Sophia the Robot performs this care through the scientific research conducted through its therapeutic sessions or in other structured interactions with people. Miquela on the other hand, is performing this care in a realm is more fluid and in turn intimate- which is the social media influencer/celebrity sphere. The notion of performance of connection being taken as connection itself is a staple feature celebrity/fan culture. Where celebrity can be understood as a continuously shifting performative practice that involves the maintenance of a fanbase,

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[272] Sherry Turkle (2011), Alone Together: Why We Expect More from Technology and Less from Each Other', Introduction, New York: Basic Books, p 9.
[273] Sherry Turkle (2011), Alone Together: Why We Expect More from Technology and Less from Each Other', Introduction, New York: Basic Books, p 9.
[274] Sherry Turkle (2011), Alone Together: Why We Expect More from Technology and Less from Each Other', Introduction, New York: Basic Books, pp 11-13.

performing intimacy -particularly with said fanbase, and constructing a consumable persona.[275] Thus, it is unsurprising that the Miquela Project is intimately tied to celebrity and influencer culture. With the rise of Web. 2.0 platforms such as Instagram building personas has become a more accessible practice.

The internet has shifted the nature of becoming famous, creating a subculture of micro-celebrity on social media platforms. In the broadcast era, celebrity was something a person was in the internet era, celebrity- often in the form of micro-celebrity- is something people do.[276] In her analysis of the phenomenon of becoming Instafamous: the condition of having relatively great number of followers on Instagram, Alice Marwick (2015) demonstrates that in micro-celebrity to gain fame, one needs to meticulously curate one's online image, through established collections of self-re-presentation practices.[277]

In the case of Miquela the ability to perform something as abstract as connectivity is based off long-standing practices of being able to curate an online persona, completely separate from one's off-line life. Miquela's Instagram account could be viewed as a different version of how people create other versions of themselves online.[278] This curation of identity allows for the success of performing connectivity, specifically on visual orientated apps like Instagram. For you see a virtual star is unable to function without a virtual culture.[279]

Yet, even in their mission to build a more tolerant and empathetic future world, Brud is laying the foundation of creating hierarchies within the very spaces it envisions to be worlds of change for the better. This point returns to the question of what Miquela re-presents. In her examination of the perception of authenticity in the case of Lil Miquela, Naomi Verburg concluded that it is best to understand Miquela as a copy of human being and a (re)-presentation of a robot.[280] As discussed above, the use of Miquela as a 'copy' of a human being is an intended action of Brud through the goal of wanting to augment human creatives using their virtual characters. Additionally, since Miquela's 'coming out as a robot' saga occurred in 2018, her persona is intimately crafted with the idea that she is a sentient robot.

To go slightly beyond Verburg, it is purposed here that Miquela is a (re)-presentation of a specific type of sentient robot and Brud's extensive marketing of the Miquela project is implicitly normalising and legitimising this (re)-presentation. It does so using female imagery and 'otherness', both of which are then commodified and commercialised to legitimise what Miquela is meant to signify. Unlike other influencers engaging and navigating the social media

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[275] Alice Marwick and Danah Boyd (2011), 'To see and be seen: Celebrity Practice on Twitter', Convergence, vol.17, no. 2, p 140.

[276] Alice Marwick (2015), 'Instafame: Luxury selfies in the attention economy', Public Culture, Duke University Press, vol. 27, no. 1, p 140.

[277] Alice Marwick (2015), 'Instafame: Luxury selfies in the attention economy', Public Culture, Duke University Press, vol. 27, no. 1, p 137.

[278] Angelos Stratis (2018), 'Curated Selves and the Future Archives', Expatriate Archive Centre, p 4.

[279] Jenna Drenten and Gillian Brooks (2020), 'Celebrity 2.0: Lil Miquela and the rise of a virtual star system', Feminist Media Studies, vol. 20, iss. 8, p 1320.

[280] Naomi Verburg (2020), 'Authenticity in Social Media: How Instagram Users Respond to The Introduction of A Robot', Master's Thesis, Utrecht University, p 23.

space, Miquela is entirely virtual, existing only online and not in real life.[281] This virtuality provides Miquela with the ability to scale in a manner traditional non-virtual human influencers and celebrities are unable to, where she can be many things and in many places all at once.

Within the virtual reality Brud has constructed around Miquela, she has a particular identity. In it, she is a sentient robot, specifically gendered and female and racially coded as bi-racial. But in the physical, 'meat-space', Miquela is a sophisticated CGI programme which is a technology that holds no sentience. Thus, Miquela is occupying a variety of different spaces, in different ways, with varying identities simultaneously. This is not to say that Miquela as a sentient robot does not find itself in the real world, because this form of Miquela is present in the way in which people engage with her, how fashion houses model her, and so forth. Thus, Miquela's web of entangled identities often conflates and bounce off each other in different ways.

This is because Miquela in a liminal realm. As used by Gavaza Maluleke (2017) in her analysis of migrant African women in Europe 'doing' their mothering on the margins of African and European lived experience, the liminal position- as exposure to everything and nothing- is a space filled with possibility, an 'in-between' position.[282] In its traditional anthropological conceptualisation liminality was coined by Arnold van Gennep to describe the rites of passage rituals that tribal societies undertook for individuals to transition from childhood to adulthood[283]..

However, it is in the work of anthropologist Victor Turner, that is used here. Turner separated the understanding of liminality in its traditional sense as a rite of passage, to apply it to modern society that increasingly moved away from religious and cultural rites practices. Rather Turner used the concept of the liminoid to describe liminal like phenomena that occur within modern society.[284] He commonly used the examples of the arts and sports, areas of play in modern society, to describe how the liminoid functions more on the individual level rather than the collective as seen in liminality. Liminoid phenonmena are intrinsically linked to industrial modern societies, where it seeks to create new cultures through the hybridisation of human and technological processes.

Liminoid captures sites of experimentation and acts more like a commodity- one you can pay for- than a collective rite of passage.[285] Most importantly it holds mass effect on popular culture. For the purposes here, it is important to emphasise that liminality and liminoid phenomena in both cases centre on the creation of some new- a rebirth of sorts into the next

[281] Naomi Verburg (2020), 'Authenticity in Social Media: How Instagram Users Respond to The Introduction of A Robot', Master's Thesis, Utrecht University, p 5.

[282] Maluleke's analysis paid particular focus to the way in which mothering existed as a performative act where it could be something done and not something a woman was. By examining the discussions of members of the African Women in Europe (AWE) online platform, she displays how the act of mothering for African migrant women in Europe garners elements of power from the liminal position the AWE members inhabit. See: Gavaza Maluleke (2017), 'The Doing of Mothering from the Margins', Chapter Five, In Mothers, Mobilization and Globalization eds by Dorsía Smith Silva, Lailaa Malik and Abigail L. Palko, Demeter Press, pp 89-110.

[283] Arnold van Gennep (1960), 'The Rites of Passage ', London: Routledge & Kegan Paul.

[284] Victor Turner (1985), 'Liminality, kabbalah, and the media', Religion, vol.15, no. 3, pp 205-217

[285] Victor Turner (1985),'Liminality, kabbalah, and the media', Religion, vol.15, no. 3, pp 205-217

stage or moment of experience. It is in this aspect that it becomes a useful lens through which to annalyse the A.I and robots as they are sites that not only capture this sense of newsness but also aim to do so in coming future landscapes. This can often inspire hope a fruitful example can be found in Donna Haraway's Cyborg Manifesto.

A cyborg is a hybrid of a machine and organism. It is a creature of both social reality and fiction.[286] Haraway (2006;1991) argues for the cyborg to be understood as a fiction mapping social and bodily reality.[287] As shall be demonstrated, Miquela and Sophia are simultaneously fiction and social reality – cyborgs. But unlike Haraway (2006;1991) who suggested that the cyborg would operate in a post-gender and post-modern world, our cyborg examples of Miquela and Sophia display how particular evocations of not only the use of gender, but also modernist inspired futures reflect themselves within each project.

Miquela is liminoid, a cyborg in that she is simultaneously social reality and fiction. Miquela is multiple identities all at once and in being so, allows for the stretching of her political identity and the economic extraction that may occur within all of them. Miquela's identity as a celebrity influencer allows for the economic extraction that may come from her followers and fans who have built connects with her. In varying ways Miquela's performance of connection is capitalised upon by Brud through the ways in which the company commercialises Miquela's persona.

Cynthia E.A. Molina articulated this well in her analysis, arguing that the implicit purpose of Miquela is to generate business for Brud.[288] This is true in that Brud is presenting a business model that holds certain advantages. Miquela's persona lacks agentic spontaneity-due to Brud being the ones curating the public image- and this allows her to never be fallible. If Miquela breaks the law, says something racist or sexist, the transgressions will all unfold strategically in a set storyline. Drenten and Brooks (2020) argue this infallibility can be commodified by brands, turning Miquela's persona- and the performance of this persona- a form of property to be bought, sold, and manipulated.[289] Thus, the human experience Miquela is meant to imitate is replicating the notion that humanity and how it is lived is a product. This illustrates the capitalistic nature of the project.

This demonstrates the complete control Brud will have over such characters in the new and emerging spaces it seeks to define. Here it is made clear how the distortion of reality feeds into the economic interests Brud seeks to capitalise upon within the "new emerging landscapes' it

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[286] Donna Haraway (2006; 1991), 'A cyborg manifesto: Science, technology, and socialist-feminism in the late 20th century,' The international handbook of virtual learning environments, Springer, Dordrecht, pp 117-158.

[287] As historian of science and a background in biological studies, Haraway's understanding of biology is not of the physical body itself, but rather to see biology as a discourse. Where it is the accumulation of knowledge and in this understanding the biopolitics of manifestations of bodies become clearer because the constructed component of it is highlighted. See: Constance Penley, Andrew Ross and Donna Haraway (1990), 'Cyborgs at large: interview with Donna Haraway', Social Text, vol. 25/26, p 11.

[288] Cynthia Elaine Anical Molina (2020), 'Lil Miquela: From Illuminati Sex Doll to Robot Pop Star-An analysis on the simulation of female microcelebrities in the CGI Influencer Phenomenon through cyber feminist notions of the Cyborg Body using the case of Miquela Sousa', Master's Thesis, Utrecht University, p 34.

[289] Jenna Drenten and Gillian Brooks (2020), 'Celebrity 2.0: Lil Miquela and the rise of a virtual star system', Feminist Media Studies, vol. 20, iss. 8

seeks to define. In a study focused on the perspectives of experts on the marketing effectiveness of virtual influencers like Miquela, participants took a similar position. Where the critical factor for success in the marketing of virtual influencers lies in how brilliantly their personality are scripted and the storylines, they participate in.[290] This is a crucial component of the advantage of Miquela's virtuality.

The curation of Miquela's persona and the measures through which it is being commodified is a mode of extracting value both in the present for Brud and in the future of emergent 3D spaces. In the present the commodification is done through Miquela's fashion brand deal sponsorships, music streaming revenue of her songs and revenue garnered from Miquela's YouTube channel. In the future of emergent spaces, Brud aims to extract the economic value using its characters becoming 'avatars' for human creators to scale their art immeasurably. The virtual nature of the emergent spaces will aid in this scalability, allowing the extraction of value gained to possibly become near endless. This outlines the way in which the project uses its gendered components as an economic benefit while also inferring notions of representations regarding the politics of identity as well.

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[290]Evangelos Moustakas, Nishtha Lamba, Dina Mahmoud and C Ranganathan (2020), 'Blurring lines between fiction and reality: Perspectives of experts on marketing effectiveness of virtual influencers', IEE, International Conference on Cyber Security and Protection of Digital Services (Cyber Security).

Chapter 4: Conclusion

The primary aim of this research study was to take a more critical position towards the private actors, particularly private companies, promising 'better' future conditions propelled by their advanced technological projects. This was explored the through the cases of Hanson Robotics, Sophia The Robot roject and Brud's Miquela project. The analysis presented within this study illustrate that behind claims of radical societal transformations, the ideological framings of such future-orientated technological projects re-produce systems of oppressions in their imaginings of the future. Therefore the 'better' futures both projects striving towards cannot be achieved. This is because the ideological framing of both projects' goals replicated the logic of modernity and colonial-world making, which functions on structures of oppression. Therefore the 'better' futures both projects striving towards cannot be achieved.

In the case of the Sophia The Robot project, coloniality operated through its processes of world-making whereby Hanson Robotics are shaping the project to allow them to have extensive control over the ways in which sentient robots can and should be imagined in the future. In the case of Miquela, it functioned through the ideological dissonance of Brud's aims for its project. Where the company emphasises its aim to produce more tolerant, empathetic, and equal future worlds. While simultaneously also striving towards defining, shaping, and influencing the ways in which people will know come to know future 3D landscapes. In this way by controlling the way these future spaces are known each company could potentially benefit from it. This emulates in differing ways the conquest of future spaces. In the case of Brud, the conquest emulates the way in which Facebook (Meta) own digital social network spaces, while Hanson Robotics ties to the western European colonialism. Both of which replicate the logic of modernity and create worlds through a colonial lens.

Yet it is in the way both The Sophia The Robot project and the Miquela project reinforces geographies of whiteness that we come to see how the projects ideological framings reproduce ideals of systemic oppression. In the case of the Sophia The Robot project, Hanson Robotics envision a future where Sophia will be a sentient benevolent machine that loves to care for humanity. This notion of care and love places Sophia into the role of a 'mother' figure which shall produce a new generation of sentient beings. Hanson Robotics seek to reinforce Sophia's sentience by establishing legal and political structures that will provide the robot with personhood status. But at the same time the company also commodifies Sophia as a product to be sold. This replicates the ways in which black enslaved women – here symbolized by Sophia the Robot- also needed to take care of white masters and produce future generations of commodities. In this way the ideological framing of Hanson Robotics of Sophia The Robot project replicates the notions of enslavement in its future imaginings.

In contrast Brud, envision a future where the tolerance of various identities are treated with empathy. The company frames Miquela to be a representation of the penultimate other -where Miquela's lived experience as a sentient virtual robot and the ways in which that is disregarded is meant to be representative of marginalized identities struggles with the same issues. However, Miquela's image and the notions it represents are consistently commodified and sold by Brud. Though the Miquela project appears to be more transformative of the way in which it accepts multiple identities, it still reinforces the notion of the 'other' being something which

can be sold. Here, Brud's ideological framing of its project masks the ways in which modernity and its need for perpetual profit by extracting resource from any thing is reconfigured in their bid for more tolerant futures.

The political and economic interests of Hanson Robotics and Brud become clear when understanding that the way each company engages with the future, is to view it as a resource. For Hanson Robotics the future is a resource in that the company is staking its claim in dominating the future industry space of sentient human-like robots. For Brud, the future 3D virtual landscapes are understood to be a means through the company could establish its robot influencers as commodities that will be required in 3D worlds. Hence, the analysis also demonstrates that beneath claims of striving towards humanity's survival, these companies hold socio-political and economic interests in the how the technologies they are creating will inform future contexts. In applying past colonial and modern present examples to the cases, the ways in which the political and economic framings of the projects replicated systems of past oppression was evident.

By interrogating the ways in which Hanson Robotics and Brud are framing the Sophia The Robot and Miquela projects, respectively, provides an illustrative example of the ways in which private companies mask their political and economic interests for their advanced technologies through promises of better futures. Though the study is limited to only the initial phase of each project and centres only on humanoid robot technologies, it still provides a useful contribution towards the field of politics and social justice through the ways in which it demonstrates the risk of systems of oppression being replicated in future contexts. Moreover, the study holds value through the ways in which it shifts the focus from the public interests to that of private interests for the ways in which future-orientated projects are frame. Having been unable to interrogate the ways in which the private companies in the case studies are creating new technological domains of governance through D.A.O's it is hoped that further research can be expanded within this area.

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