



WSOA3028A: INTERACTIVE MEDIA IIIA

ESSAY 2: DIGITAL COLONIALISM



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Introduction

Colonialism in its traditional and notorious form can be defined as the establishment, control and exploitation of indigenous people and resources by foreign powers with the purpose of social, economic and political profit (Merriam-Webster, 1989). The foreign powers are referred to as “Colonizers” and the native people who are subjected are the “Colonized”. Due to the dominance and subjugation of colonizers on the native people, foreign religious, linguistical and cultural practices are often imposed leading to a loss of identity amongst the colonized (Longley, 2021). While this essay’s title relates to colonialism, it would be impossible to dissect without the mention of imperialism. Imperialism is the doctrine of exerting power and influence through the practice of colonization (Oxford, 1989). Historical examples of these include European colonization of Africa, Americas and India and present-day American Imperialism (Stuchtey, 2011)

Digital colonialism refers to modern technological colonialism where tech-companies based in the Global North exploit and extract data and resources for profit and market purposes primarily from disadvantaged people from the Global South (Coleman, 2019). Parallels can be drawn to display the relationship and similarities between the traditional form of colonialism everyone is aware about versus digital colonialism. Digital colonialism can be characterized by corporate technological giants most notable the Silicon Valley Giants – GAFAM(Google/Alphabet, Amazon, Facebook, Apple, Microsoft) coupled with American state intelligence agencies such as the NSA resemble how the East India Company were granted governance over the Indian Territories by the British Government (Kwet, 2019). In this essay we will discuss how digital colonialism impacts us as developers in South Africa, while drawing on examples and frameworks from Sareeta Amrute and others to substantiate our arguments.

Tech-Colonialism

Amrute states that there has been a reproduction of colonialism in the technology industry and follows cornerstones by which every colonialist nation exerts their dominance over the colony:

- **Hierarchical:** Establishing a ranking order in which the colonizer reigns above.
- **Extractive:** The removal of native resources for the purpose of colonial profit
- **Exploitative:** The abuse of labor, consisting of the unfair treatment and often enslaving of indigenous peoples.

The pattern that these policies produce often leads to ramifications of unequal standards. Due to the hierarchical order of the colony, the colonizer reaps the rewards of what the exploited sow. These conditions are substantiated by the abuse of paternalism (Amrute, 2020).

Paternalism is the practice by which people in an authoritative position restrict subordinates, with motivation that it is within the subordinates' best interests to adhere to. (Dworkin, 2020)

These principles and patterns are widely seen within the modern-day technology industry.

Apple is an American multinational technology corporation based in Silicon Valley. It creates and sells electronics and software and is one of the largest computer and mobile phone manufacturers in the world (Anisimova, 2022), however, colonial relationships have played a role in Apple's rise to the top. Apple's main consumer products such as the iPhone and Mac book laptops contain lithium-ion batteries (Apple, n.d.).

64% of refined cobalt was used in the manufacture of lithium-ion batteries and it continues to grow (Darton Commodities, 2021) and the Democratic Republic of Congo (DRC) accounts for 70% of global cobalt production (Jaganmohan, 2024), however the conditions under which these minerals are mined are intensely hazardous and dangerous, with the **exploited** workforce

consisting of both adult and child labor (Jaganmohan, 2024). The average daily wages of these miners amount to USD 7,65 (Delve Database, 2023). These minerals which have been **extracted** from DRC reach the manufacturing factories of Apple in countries such as China, where workers in the factory operate under sweatshop conditions and cheap labor (Carlson, 2010) and are then distributed globally with Apple receiving the billions in profits, whilst the



Figure 1-Cobalt mine in DRC (Bashizi, n.d.)

people of DRC and China reap none of the profit, according to the **hierarchical** structure implemented. Many of these mines are controlled by western mining companies who attribute these mining activities to the development of infrastructure and the economy of the DRC yet, according to the United Nations, the DRC ranks 180 in the world out of 192 countries in terms of Human Development Index (United Nations Development Programme, 2024), clearly displaying the **uneven consequences** and practice of paternalism perpetrated (Gulley, 2022), highlighting how colonial legacy remains prominent and intertwines with the technology industry



Figure 2- iPhone Factory in China (Shen, 2016)

Labor Trends in Software Development

At the beginning of May 2024, Google announced that it would be laying off hundreds of employees from its core division. It was stated that positions from the California office were being eliminated and transferred to Mexico and India (Elias, 2024). According to Google's senior vice president Prabhakar Raghavan, Google is shifting towards the developer market of countries like India, Brazil and Mexico for the lower cost of labor but emphasized the reasoning as breaking into key markets but can be interpreted as another form of paternalism (Elias, 2024) as Google continue to increase profit margins whilst strategically utilizing the cheap labor of third world countries.

This trend is not exclusive to Google however as more multinational corporations are laying off local skilled workers in favor of foreign workers. In Silicon Valley specifically, three-fourths of the workforce was foreign born or non-US citizens, which led to a drastic increase in revenue and productivity (Silicon Valley Index, 2022). This uptick in foreign hiring was fast tracked by the Covid-19 pandemic, which forced companies to start accommodating digital working environments over in person offices. This made sense especially in industries such as technology and software where the brunt of the work can be completed remotely, yet it left the local market disjointed in favor of exploited labor and profit (Mathison, 2022)

In her paper, Amrute relates the extraction of minerals and resources of traditional colonialism to the malicious use of user's data in tech-colonialism. She states how the extraction of raw data, gathered from social media terms of service and user's registering personal information on accounts online is treated in similar manner to a raw material that can be extracted and processed (Amrute, 2020). Third world countries are exporters of the materials and importers of the product. The third world has become ever connected to the first through use of technology and telecommunications (Taylor, 2023). Often, usage of these technologies compels the user to give up their data, which is collected through terms and conditions and poor enforcement of or lack of data privacy laws (Runde, 2017)

As aforementioned, Silicon Valley giants shifting towards the third world could be interpreted as another usage of paternalism or perhaps it is true that their goal was to move towards a key market but with vested interests. We know that they use these markets for low-cost labor and exploitative hours to boost productivity and revenue (Mathison, 2022) but the extractive nature of the relationship leans towards the collection of data of the third world through consumer-based terms and conditions or employment contracts. (Runde, 2017)



Figure 3- Tech Companies Rank Among Most Profitable (CIO Africa, 2024)

South African Software Industry

The South African software industry is currently valued at \$1.2 billion and is expected to achieve a value of \$3.4 billion by 2030. South Africa has the largest information and communications technology (ICT) industry in Africa and is therefore a continental leader in the software development field (IndustryARC™, 2023). Since before the pandemic, there has been a shift towards digitizing the economy and developing a modern ICT industry in hopes of aligning with the 4th Industrial Revolution. (Manda & Backhouse, 2017). As such there has been a strong demand for software developers and engineers but due to brain drain, there is a shortage of these skilled workers (IndustryARC™, 2023).

Brain drain is the emigration of skilled workers from a country (Oxford, 1989). The economy of South Africa has lagged against that of western countries and therefore many skilled workers seek better employment opportunities abroad. Opportunities to live in a safer country while earning much more than their local peers appeals to these workers (Network Contracting Solutions, 2023). The local software industry has been affected by these conditions thus creating a scarcity of labor. The scarcity of labor creates a burden on local software developers who often cite understaffing as the primary concern of labor conditions according to a report done by UniCollege.

Layoffs in the tech-industry are not exclusive to Google however, as during the pandemic many companies failed to plan accordingly and hire far too many developers and engineers than was needed (Oh, 2024). This was due to Big Tech companies following a business model of hyperspecialization, where different groups of employees focused on a particular issue. This allows for Big Tech companies to hire many employees and investors seen this hiring trend as a sign of growth, increasing the stock price and value of the company (Oh, 2024). While this trend was not majorly seen in the local market, the effects rippled through the global market and in 2023 one in twenty developers were retrenched, although the market is displaying signs of some growth. (Joubert, 2024)

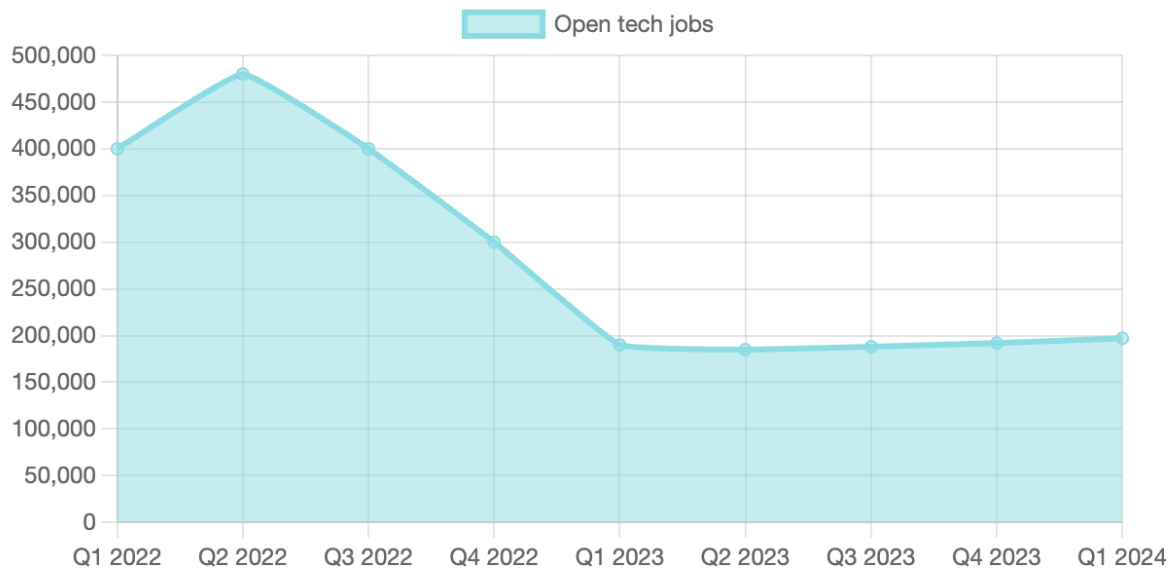


Figure 4-Open tech jobs in South Africa (Joubert, 2024)

This highlights how western Big Tech companies can have an effect on global employment trends as the removal hyperspecialization has been optimal solely for massive corporations and SMME's are reluctant to hire new entry level talent, creating job insecurity for engineers and developers. While the western tech corporations rake in profits through pouncing on cheap foreign labor, local companies receive the blunt end (Oh, 2024).

Conclusion

As future software developers, particularly in the context of South Africa, a nation that has been victim to colonialism in the past, thus it is of utmost importance that we understand both the historical context of colonialism and its modern day forms as we see how the relationships and practices are still conserved by western tech corporations that exploit resources and labor of the Global South, hindering local development and reinforcing systemic inequalities.

As developers, we have the ability to shape the digital landscape according to our tune by prioritizing and empowering local communities in the technology we create instead of exploiting. In the age of a digitized economy, software must be developed to include not only the middle and upper-class but also the lower-class of society. Software should be used to address local issues and should be readily accessible to those who need it, whilst maintaining stringent data protection laws but amongst these, we must continually advocate for digital literacy throughout the rural and less fortunate areas of the country. In doing so, it will unlock the potential of not only the local tech industry but will spread throughout the country's economic sectors.

As South Africans, we naturally possess a nature of collaboration amongst us. This is seen throughout our daily lives as South Africans from all walks of life are willing to assist in a matter, big or small. This culture of collaboration must be extended into our economy and industries by opening it up to mentoring and supporting individuals from previously disadvantaged groups and creating a more equitable and inclusive future.

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