The South African software development industry faces a critical challenge: digital colonialism. This phenomenon perpetuates exploitation and hierarchies, hindering local innovation and agency. Using Sareeta Amrute's framework "Tech colonialism today", this essay argues that digital colonialism has had a profound impact on developers in South Africa today, perpetuating extractive and exploitative relationships in the industry. This essay will critically examine the power dynamics and labour implications of these relationships in the global software development industry. Through this analysis, I will reflect on my own stance on decoloniality and my role in combating digital colonialism and promoting decolonial practices in the industry.

According to Amrute, understanding tech colonialism requires examining the inner workings of technologies and their underlying ideologies. Tech companies embed superiority complexes, or 'techno-chauvinism', into their creations, implying human inferiority to machines (Amrute, 2020). This perpetuates a colonialist approach, imposing hegemony over less powerful regions, exacerbating existing power imbalances. This hierarchy is deeply ingrained in technology's inner workings and outer limits, disproportionately affecting the global South and marginalized groups as it upholds the global North while degrading the validity of the epistemologies of the global South in the crafting of new fair technologies.

Amrute's work reveals how tech companies exploit workers in the global South through unfair labour practices. In white-collar programming jobs, tech companies outsource work to "elite" white male workers over women of colour, perpetuating exploitation, and extreme marginalization (Amrute, 2020). Workers in the global South face poor working conditions where they are expected to work longer hours and earn lower pay. An example of this can be seen from how Google laid off at least 200 of its employees from its “Core” teams, with an attempt to build teams closer to their key partners and markets, India and Mexico (Elias, 2024). By justifying the layoffs by using their need to “maintain their global footprint and optimize business goals,” Google exemplifies this exploitation. By capitalizing on cheaper labour costs and moving work to “developed” geopolitical locations, Google further perpetuates the global North-South divide, further marginalizing workers in the global South.

Amrute's work on "Tech Colonialism today” further exposes the extractive nature of tech companies, which prioritize data extraction and knowledge appropriation from native traditions (Amrute, 2020). As Shoshan Zuboff's close reading reveals, tech companies collect

and process personal data from online activities which include users registering for state benefits, violating users' privacy rights under the POPIA Act. This extraction perpetuates a hierarchical structure, positioning tech companies to exploit users, particularly in the global South. By leveraging users' confidential information and using that raw data without the user's consent, tech companies reinforce their power and overall control over less powerful users, highlighting the need for greater data protection and user awareness.

Moreover, Amrute's work also exposes the uneven consequences of tech colonialism in the global South, where malevolent paternalism perpetuates epistemicide. Tech companies claim to be the sole providers of tech solutions, often disregarding value of local epistemologies and the agency and contributions of the colonized (Amrute, 2020). This paternalism reinforces the superiority of Western epistemologies, erasing the value of knowledge from the global South and dismissing the knowledges and experiences of the colonized. By ignoring diverse perspectives, tech companies perpetuate epistemicide, deeming their solutions superior and reinforcing the power dynamics of colonialism even within the production of tech solutions that are supposed to benefit all who use digital technologies in various aspects of their lives (Amrute, 2020). An example of the manifestation of malevolent paternalism and how it perpetuates a form of epistemicide can be seen from the Google article when Asim Husain , the vice president of Google Developer Ecosystem said , "-we are also expanding in high-growth global workforce locations so that we can operate closer to our partners and developer communities … and that the changes are in service of our broader goals as a company" (Elias, 2024). By prioritizing Western epistemologies emerging from countries like China and Mexico, Google continues to erase the alternative ways of knowing and epistemological diversity within the local, global South, reinforcing the colonial power dynamics and exemplifying paternalism.

The impact of technology colonialism on labour situations in global software development is also significant. Western tech companies outsource and offshore coding work to countries like India and Mexico, exploiting cheaper labour found in those areas and perpetuating the global North-South divide. Google and Microsoft have taken advantage of lower labour costs in these countries, devaluing local epistemologies (Sharma, 2019). By hiring remote developers at lower costs, tech companies intensify the global North-South divide. Furthermore, the exploitation of labour costs in Western "civilized" countries like India and Mexico reinforces the global North and South divide because it infers the idea that western epistemologies from these countries are more "valid" or "important" in direct comparison to

local epistemologies where the labour costs are inherently cheaper. A Deloitte study reveals the extent of this trend, with over 59% of businesses already outsourcing to India and 22% of non-outsourcers planning to do so in the future [as shown in the image below] (Sharma, 2019).

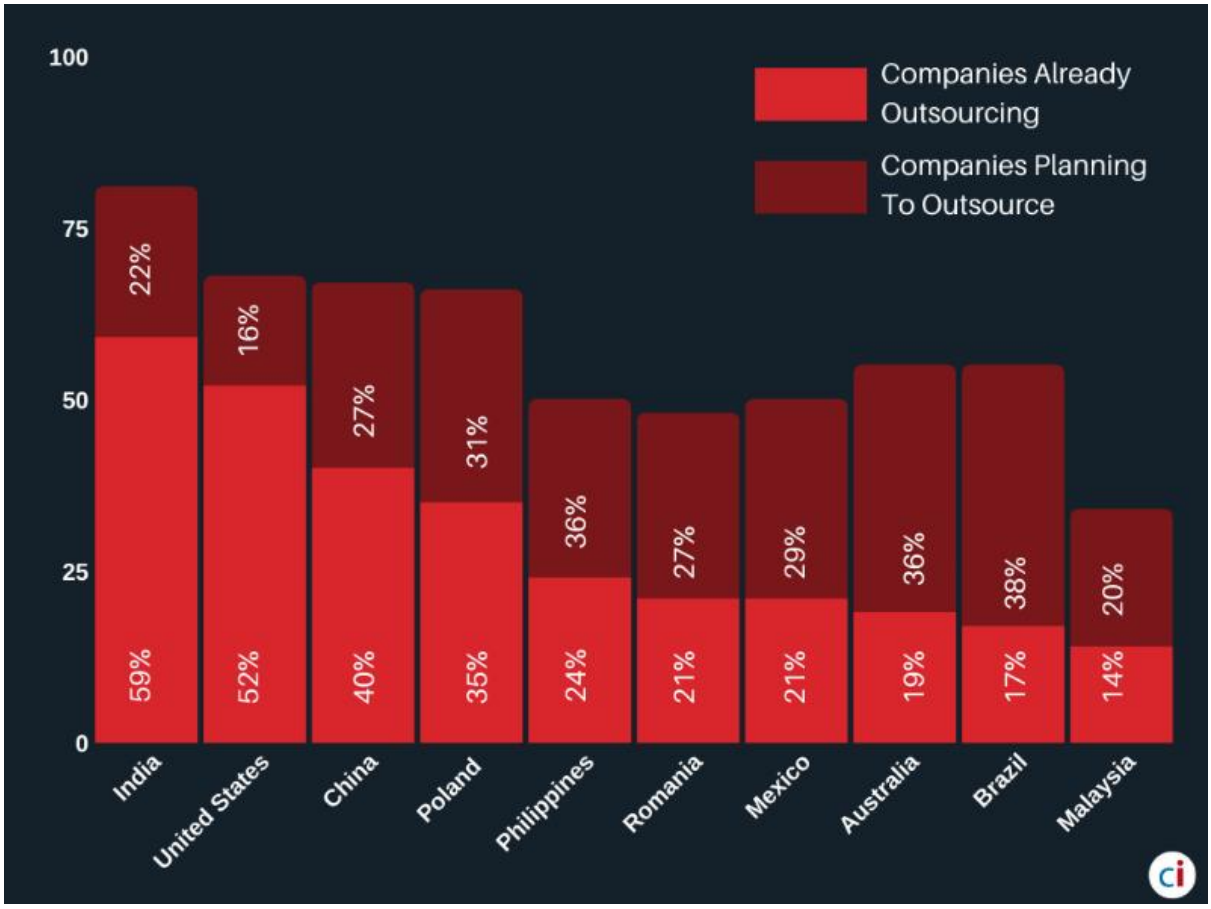


*Figure 1: (Sharma, 2019)*

In figure 1 above, Outsourcing statistics reveal the global North-South divide. India, a developed country, receives a high rate of outsourcing, while Malaysia, a developing country, receives significantly less, illustrating Western tech companies' exploitation of cheaper labour in developing countries. This means that Western tech companies are taking advantage of cheaper labour costs in developing countries (like Malaysia) by outsourcing work to those countries, rather than doing the work in their own countries (the global North) (Sharma, 2019). This perpetuates the global North-South divide, where developed countries benefit from the labour of developing countries without fully acknowledging or compensating the value of that labour.

Furthermore, then instances of labour situations within the global software development can also be seen within global value chains where multinational corporations control the design,

production and distribution of software while delegating development work to smaller firms or individual contractors in peripheral countries (Kraemer, 2011). This set-up places the multinational corporations at an advantageous position to exploit the workers in peripheral areas and benefit from the fruits of their labour without fair compensation. This seen through the development and manufacturing of iPhones where Apple designs and markets iPhones in the United States, while subcontracting the manufacturing work to Foxconn in China, where workers (in the Global South) face harsh and poor working conditions (Kraemer, 2011). Workers in turn end up intensifying their labour to produce more commodities in a set period to earn the firms a productivity advantage. The following images exemplifies the epitome of the global value chain, showing the full process of how iPhones are designed and marketed and exploitations of workers in the global South.

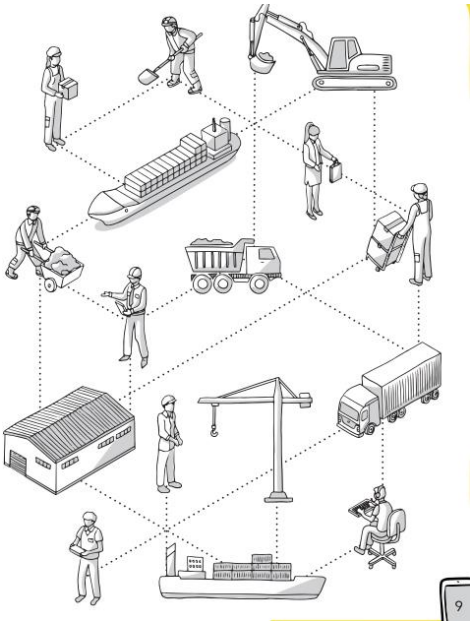

*Figure 2: (Kraemer, 2011)*

Figure 2 above provides a visual representation of the disarticulation of the production of iPhones where the raw materials are produced and moved from one country to another for final production. In the image above a capacitor is manufactured in one place while the screen is made in another. The various components then get transported and are brought to a third place where all the components from various places are combined to assemble an iPhone. This in turn created a new system that undermined the labour rights and consequently enabled the increase of global capital at the expense of the exploitation of workers in the global South.

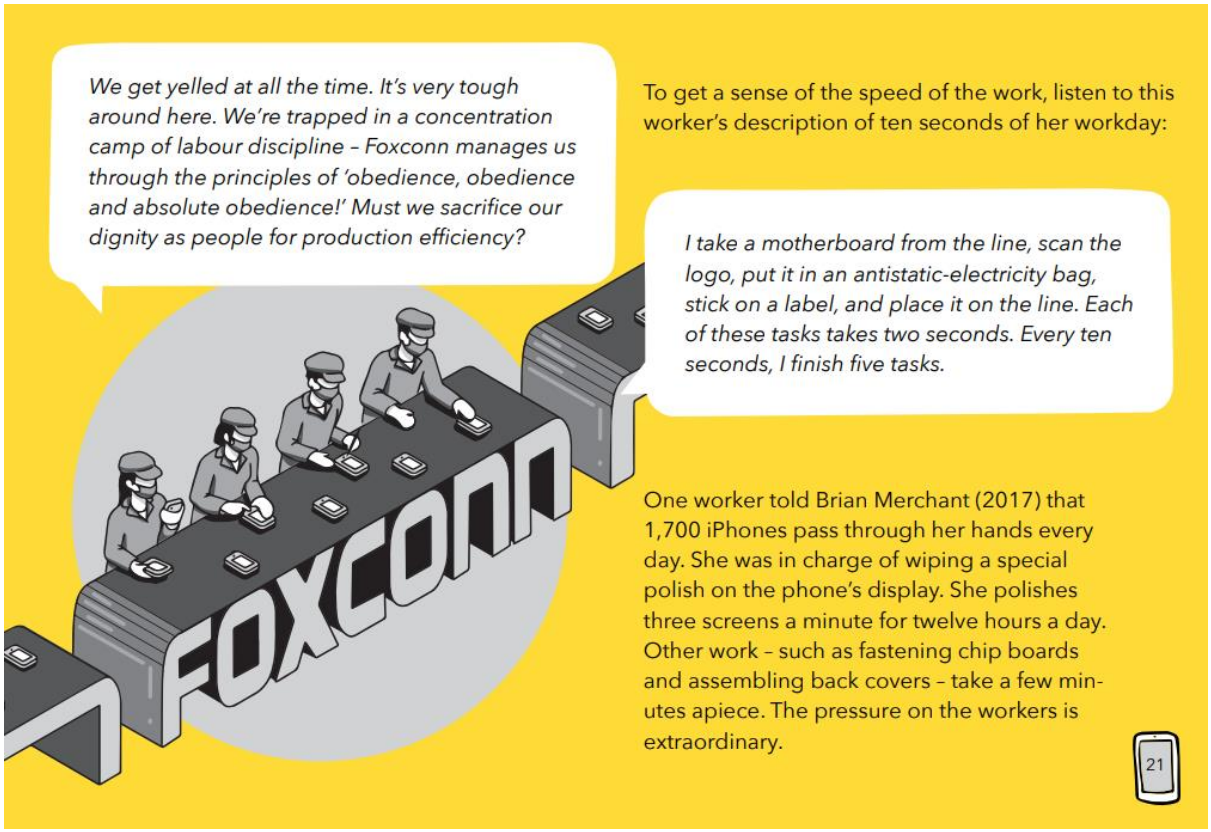


*Figure 3:(Kraemer, 2011)*

Figure 3 above is an account of global value chains operating within the production of iPhones where workers are subjected to extraordinary working conditions to make the firms, they work at earn a productivity advantage at marketing and selling iPhones.

The concept of tech colonialism and digital labour exploitation has also had a profound impact and relevance to the South African software development industry. This impact is evident within open-source exploitation where South African developers contribute voluntarily to open-source projects such as submitting code patches via GitHub without proper recognition or compensation, thereby perpetuating hierarchical and exploitative colonial relations (Consulting, 2006). As a result, they exemplify Amrute's framework of tech colonialism, highlighting the long-lasting impacts of colonialism in the digital age.

Moreover, the impact of tech colonialism may also propel South African developers to hire remote workers from other countries, highlighting the upholding of Western epistemologies over local epistemologies in the production of tech solutionsS (Thorne, 2024). As a result, this may potentially perpetuate digital colonialism and exploit labour disparities. As such, South African developers therefore continue to exhibit this "one way of knowing" idea that

has been passed down onto them because of the effects of digital colonialism without considering various avenues of knowledge that are just as valid and viable to implement.

The effects of tech colonialism within the South African software development have also contributed to the Skills Drain in the industry (Writer, 2022). Since local developers are not fully recognised nor are they fairly compensated for their contribution in open-source projects, they may have to emigrate to other countries for better opportunities. As a result, this might perpetuate a brain drain, leading a big hole that is hard to fill within the south African software development industry as there may not be as many people with similar skills to fill that void.

To counteract and avoid the complicity of perpetuating the long-lasting impact of tech colonialism, the South African markets of developers have made efforts to expand the use of Open-Source Software (OSS) in the SA markets, particularly in the public sector (Consulting, 2006). With the specific focus on alleviating the hold of colonialism within open-source projects and data colonialism, the adopting of the OSS was made with the intention of allowing for more local software developers and support, increasing investment in the local economy and the broader participation of South African companies in the regional economy. The awareness of South African developers of the intricacies of tech colonialism highlights a strong resistance to the conformity of open-source exploitation and technological imperialism (Consulting, 2006). A manifestation of this resistance can be seen when one of the developers of a small but growing South African company that specializes in OSS services and support said it wouldn't work in their  to offer their services to a proprietary software company if they would have to constantly ask for permission to change the code because there is  a higher power that they are operating under, enforcing an authoritative  and colonial rule on them.

According to Mignolo and Walsh, central to what constitutes decolonial thinking is the will to use decoloniality to undo, disobey and delink from the colonial matrix of power, actively constructing paths and praxis towards an otherwise thinking, sensing, doing and living (Mignolo, 2019). This places the act decolonial thinking as a standpoint or a mode of a critical thought underpinned by  the broader intention of unravelling the hold of coloniality/modernity. As such, my role in decoloniality as a black future developer in South Africa is to adopt the self-responsibility of critiquing the consumption and production of knowledge systems and being aware enough to recognise the repetition of colonial patterns, having understood the intricacies of colonial relationships. While South Africa's software

development field is greatly infiltrated and dominated by white, male Afrikaans people with a large shortage of people of colour in the tech space, the responsibility of calling out multiple forms of epistemicide within the workplace and being brave enough to stand up for what is right remains my key mindset goal. In her work, Amrute speaks about the act of practicing decolonial thinking as joining existing movements which radicalize and politicize ethics, practicing refusal as well as rethinking one's agency (Amrute, 2020). All the latter practices require a deep understanding of how to move away from modernity/coloniality and deconstruct ways of knowing that have been embedded within Western Epistemologies to bring them to light to bridge the global North and South created by colonial systems.

In conclusion, this essay has critically examined the impact of tech colonialism on the South African software development industry. Through the lens of decoloniality, I have reflected on the ways in which colonial power structures perpetuate exploitation, epistemicide, and cultural homogenization leading to the erasure of the culture of colonized people. By analysing the effects of open-source exploitation, digital labour exploitation, and the dominance of Western epistemologies, I have argued that tech colonialism perpetuates inequality and undermines local development and the validity of their epistemologies. However, by embracing decolonial thinking and practices, I commit to challenging these colonial patterns and promoting decolonial practices in the industry. Through this stance, I aim to contribute to the creation of a more inclusive and diverse software development industry in South Africa, one that values local knowledge systems and promotes social justice. (2078).

# References


Amrute, S., 2020. *Medium : Tech Colonialism Today.* [Online]
Available at: https://medium.com/datasociety-points/tech-colonialism-today-9633a9cb00ad
[Accessed 03 June 2024].

Consulting, V. W., 2006. *Vital Wave Consulting: The South African Adoption of Open Source.* [Online]
Available at: https://vitalwave.com/wp-content/uploads/2015/10/AP_South-African-Adoption-of-Open-Source.pdf
[Accessed 05 June 2024].

Elias, J., 2024. *CNBC : Google lays off hundreds of 'Core' employees, moves some positions to India and Mexico.*. [Online]
Available at: https://www.cnbc.com/2024/05/01/google-cuts-hundreds-of-core-workers-moves-jobs-to-india-mexico.html
[Accessed 04 June 2024].

Kraemer, K. &. L. G. &. D. J., 2011. *Tricontinental: Institute for Social Research Notebook N2 : The Rate of Exploitation (The case of the iPhone).* [Online]
Available at: https://thetricontinental.org/wp-content/uploads/2019/09/190928_Notebook-2_EN_Final_Web.pdf
[Accessed 05 June 2024].

Mignolo, W. &. W. C. &. C.-K. S., 2019. On decoloniality. concepts, analytics, praxis by Walter D. Mignolo and Catherine E. Walsh. *MLN,* 143(2), pp. 512-519.

Sharma, S., 2019. *classinformatics : Everything You Need To Know About Outsourcing To India.* [Online]
Available at: https://www.classicinformatics.com/blog/outsourcing-to-india
[Accessed 03 June 2024].

Thorne, S., 2024. *Business Tech : The rise of remote work in South Africa.* [Online]
Available at: https://businesstech.co.za/news/lifestyle/760043/the-rise-of-remote-work-in-south-africa/
[Accessed 06 June 2024].

Writer, S., 2022. *Business Tech*. [Online]
Available at: https://businesstech.co.za/news/it-services/571854/south-africa-is-seeing-a-tech-brain-drain-these-are-the-skills-most-in-demand/
[Accessed 05 June 2024].