Power relations and technological transformations in Africa: A Foucauldian analysis

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Mini dissertation accepted in partial fulfilment of the requirements for the degree *Master of Philosophy* at the North-West University

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Graduation: June 2025

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Contents

Acknowledgments

My deepest gratitude to my supervisor and mentor Prof Jean Du Toit who is always supportive.

A special thanks to my colleagues, and Prof D.A Masolo for his consultation and guidance.

I also thank my family and friends for the support.

Abstract

The nexus between power relations and technology has emerged as a crucial point of philosophical concern and inquiry in the contemporary, rapidly evolving global landscape (Craig & Valeriano, 2017; Lee et al., 2020). Given the focus on power, it seems appropriate to employ a Foucauldian analysis of the relationship between power and technological development in Africa, given the continent's experience of colonisation which embedded specific colonial power relations that continue to shape its contemporary technological landscape.

These philosophical questions become even more pressing in the age of digital technologies, which have seemingly decentralised and transformed power relations. For instance, in Africa, technology serves as a catalyst for social growth. However, power relations are defined and perceived differently based on specific social and cultural contexts (Shizha, 2016:49). This can be seen regional integration efforts as regards technology, such as the establishment of the Southern African Development Community (SADC), whose policies centralise development through technology.

To understand and analyse the impact of technology on society, an important role of the Philosophy of Technology is to study its political dimensions, which involve power relations (Franssen, 2015; Hansson, 2015). Michel Foucault (1926–1984), who focuses on the relationship between knowledge and power in terms of social control, provides valuable insights for this analysis (Gutting & Oksala, 2022; Schwan & Shapiro, 2011:1). This study focuses on Foucault's insights because they lay a foundation for understanding contemporary society and the rise of subjectivity in this context (Gutting, 2013).

Integrating Foucauldian understandings of power relations into the discussion offers a holistic approach to technology, essential in Africa's culturally diverse context. By incorporating history, Foucauldian methodologies provide a framework for rethinking metaphysics, epistemology, and ethics. This study thus advocates developing an African Philosophy of Technology in academia from the post-colonial context, influencing policy to support African governments in achieving the "Africa We Want

Chapter One: Introduction and contextualisation

1.1 Introduction

The nexus between power relations and technology has emerged as a crucial point of philosophical concern and inquiry in the contemporary, rapidly evolving global landscape (Craig & Valeriano, 2017; Lee *et al.,* 2020). Technology is commonly defined as the practical application of scientific knowledge by humans. The transformation of scientific knowledge into practicality involves tools, artifacts, systems, processes which are aimed at facilitates different aspects of human life[1]. Wolff (2021: 1) states that technological advancements are opening a new terrain for challenging traditional philosophical, political, and economic questions – especially in terms of human relations and the potential impact of technology in this regard. Such contemporaneous concerns are founded upon long-standing critical debates regarding technology and its impact on society. These debates include the question of whether technology shapes society, as technological determinists such as Heilbroner (1967) suggest, or whether it is merely a tool used for our betterment, as technological instrumentalists such as the social constructivists of technology, Pinch and Bijker (1984), argue. These remain perennial axes for debates in the Philosophy of Technology, but even so the relation of such discussions to the question of power remains a fruitful avenue for research.

Asking these philosophical questions becomes even more pressing in the age of digital technologies, which have seemingly decentralised and morphed power relations (Russo, 2018:655). The digital age has ushered in transformative advancements, revolutionising individual interaction, communication, and access to information. Yet, beneath these advancements are the persisting disparities that define our world, particularly in the context of the global North and South. The global North represents the economically developed countries around the world, while the global South represents the economically backward disadvantaged countries (Odeh, 2010: 341). The disparities between the two are measured by, for example, levels of productivity, population growth,

[1] This study focuses on this holistic definition of technology.

dependency burdens, agricultural production, exports and international relations (Odeh, 2010: 341).

Various countries have made attempts to combat the effects of the disparities that exist between regions, including the establishment of unions, organisations and policies. In an era marked by dynamic technological advancements, the Southern African Development Community (hereafter SADC) region stands at the crossroads of innovation and power dynamics in the African context. The SADC is an offshoot of the Southern African Development Coordinator Conference (SADCC) and was established in 1992 with the aim of advancing the cause of national political liberation in Southern Africa (SADC, 2022). The SADC comprises 15 member states, namely Angola, Botswana, Comoros, Democratic Republic of Congo, Eswatini, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, United Republic of Tanzania, Zambia, and Zimbabwe.

Some of the objectives of the SADC are to achieve development and economic growth; alleviate poverty; enhance the standard and quality of life of the people of Southern Africa and support the socially disadvantaged through regional advantage; and to evolve common political values, systems, and institutions (SADC, 1993: 5). These objectives are to be achieved by harmonising and socio-economic policies and plans of member states with the goal of promoting the development, transfer and mastery of technology. Politics and development are the foundation of the SADC and according to the Centre for Global Development (2023), technological advancements are the driving forces of development.

As nations within this diverse region embrace the transformative potential of technology, the intricate interplay between power relations and technological progress becomes increasingly apparent. While the year 2023 marked 31 years since the SADC was established, and despite the growing integration of technology in the SADC region, there is a gap in understanding how power relations shape and are shaped by the adoption and use of technology.

1.1.1 Technological problems facing the SADC region

Conceptualisations of technology differs according to geographical locations, for example, the applications and public perceptions of technology in the global North and South differ due to the paths taken in their development (Wolff, 2021: 1). As part of the global South, Africa is a continent known for its still developing technological milieu[2], and particular technological challenges facing Africa include the digital divide, which also circumscribes skills and education gaps in society, as well as infrastructure limitations (Bagarukayo & Kalema, 2015: 170).

A potent consequence of these technological challenges in the SADC region may be found in healthcare technology and how it is utilised in the region. Barriers such as unskilled human resources to operate telemedicine[3], particularly evident in countries such as South Africa and Zambia, make it impossible for the efficient use of this technology (Dodoo *et al.*, 2021). Another challenge facing the region is the ineffective deployment and integration of e-government and digital services. A study by Siyavizva *et al.* (2022) indicates that the implementation of e-governance in countries such as Zimbabwe and Zambia are hindered by a lack of constant maintenance, making the proper integration of such services difficult.

Moreover, the SADC Regional Infrastructure Development Plan highlights that the region is faced with the following challenges:

1. Insufficient energy supply to serve production and to extend access.

2. Highly priced, unpredictable transport and logistics services, especially for landlocked states.

[2] Technological milieu refers to a setting where people interact with technology and technology becoming part of the world (Aydin et al, 2019).

[3] Telemedicine refers to the remote diagnosis and treatment of patients using information and communication technologies (Mahar et al, 2018).

3. Lack of low-cost information and communication technologies.

4. Inadequate meteorological services for effective and efficient planning and management of water resources, energy production, transport services and other climate-sensitive sectors.

5. Unacceptably high numbers of citizens without access to safe drinking water, adequate sanitation, and water for irrigation to improve systems for agricultural production which will contribute to food security (SADC, 2012: 5).

Critical infrastructural deficiencies in energy production, transport and communication services, and water distribution systems will hinder socio-economic development in the region. Challenges with regard to access to essential services are due to high costs, inefficiency in terms of existing enablers for technological development such as infrastructure and skills, and limited accessibility.

1.1.2 Historical roots

Interactions among various groups have played a vital role in shaping the SADC's history and also feed into the problems mentioned in the previous sections. All the different interactions – from the interactions of indigenous groups to the influx of Bantu-speaking groups from the north and the subsequent encounters with the Europeans – have left a lasting impact on the region. While some interactions were peaceful, such as those between the Bantu and indigenous people, those between the Europeans and the indigenous people were marked by conflict driven by the pursuit of dominance in the pursuit of resources (extractive colonialism). The abundance of natural resources in the region resulted in trade and cooperation being characterised by tensions and hostilities, which often resulted in violence (structural and otherwise) (Mckenna, 2011: 212).

Today, SADC reflects the intricate legacies of its past due to such colonial divisions. While some countries peacefully gained independence (for instance Zambia and Botswana), others endured prolonged struggles for liberation (for instance Algeria and Angola). Post-

colonial challenges, such as political instability and economic hardships, continue to persist in the latter examples. However, the SADC has demonstrated resilience in its past, with some countries, like South Africa, achieving political and economic stability (Mckenna, 2011: 212). This has also impacted technological development and assimilation, since unstable political contexts and a lack of economic development are negatively associated with the effective use of technology.

There is a relationship between colonisation, and particularly the specific power relations it embeds, and the current state of technological development in the SADC and Africa at large (Hwang, 2007: 57_. Shortcomings in terms of technological development are often assumed to be the result of the region not being as economically developed, politically complex, or culturally advanced as the larger settled colonies (Hwang, 2007: 57).

Moreover, part of colonisation's effects on the views regarding Africa and technology is the obfuscation of historical technology use in Africa and the development of a perception that Africans did not have technology before they were colonised. This problematic stereotype reflects a very specific Westernised view of what technology constitutes. However, there have long been traditional technological developments in Africa that such accounts disregard. For example, Gyekye (1995: 133) narrates how a traditional food technologist in Ghana provided a solution to a problem that was posed by a research team. When reflected upon, the solution provided by a local woman made use of scientific principles such as physics, chemistry and biology. This example speaks to the broader SADC region as well, since technological developments in Southern Africa were not solely brought in from Great Britain or forced upon local populations. Instead, various everyday technologies, such as firearms and clothing, became topics of extensive discussion and consideration within the diverse cultures of the region (Storey, 2018).

A reason for the continuing disregard of African approaches to technology is that the African approach is often stereotyped as lacking in terms of scientific commitments and it is assumed that Africans make no attempts to investigate the scientific theories that underpin the technologies developed. Stamp (1989: 8) argues that problems regarding technological incorporation in Africa are complicated by fragmented knowledge. Nilsson (2016: 481) argues that there is a lack of focus on two important aspects, these being the

centrality of innovation in technological development and adapting the colonial technological framework to better fit the needs of the local society and its present socio-economic conditions. Therefore, Gyekye (1995: 128) calls for contemporary African cultures to align themselves with contemporary scientific attitudes and approaches such as technological advancements, new discoveries, and evolving scientific paradigms to be able to address these shortcomings in terms of Africans' attitudes, and approaches to technology. Gyekye (1995: 134) proposes that Africa will have to participate in the global technological world since it is a part of human culture in general, both historically and increasingly contemporaneously in terms of digital technology.

Therefore, aligning with contemporary scientific approaches, as Gyekye proposes, will help combat the challenges that Africa faces in terms of technological development, and it is also important for the development of Africa's social and economic structures. Even though the continent is faced with technological challenges, there has been progress in aligning policies with contemporary scientific approaches. The African Union Commission (AU) (2020: 10) has formulated the AU Science, Technology and Innovation Strategy for Africa 2024 (STISA-2024), which arose as a response to Africa's demand for science, and innovation, and which has an impact on agriculture, energy, environment, health infrastructure development, mining, security and water distribution. This strategy also includes efforts by African leaders to combat social problems facing Africans, such as poverty and unemployment. In Southern Africa, the South African National Development Plan 2030 aims to achieve technological change by applying its scientific and technical knowledge to develop innovative approaches (NDP, 2012: 23). The NDP states that "South Africa's development is affected by what happens in the region and the world [and] success will depend on the country's understanding and response to such developments", with technology being one of the key areas to focus on in order to achieve this (NDP, 2012: 18).

Even though these policies are envisioned to combat technological challenges facing the region, they also problematically enable technological consumerism[4], reinforce a rampant capitalism, and centre techno-solutionism. Consumerism promotes materialism which

[4] Technological consumerism refers to the shaping of consumer behaviour by technological advancements.

has a debilitating impact on culture, identity, and critical thinking leading to disrupted social conditions (Adorno & Horkheimer, 1944; Strikwerda, 2018). For instance, people are fond of owning a smart phone and rely on it for their daily routines; however, the smart phone does the thinking for them and becomes seen as a solution for all the problems. There is an overreliance on smartphones which is explained by techno-solutionism and consumerism. On the other hand, the inventors of smart phones who are mostly based in Western countries are gaining more wealth and control over the consumers. There is an overreliance on modern technology and has come to define our existence and epistemology (Carroll, 2017)– and the foundations of this form of thinking must be opened to critical philosophical reflection. Underlying such problems in Africa is a checkered history of problematic power relations established under colonialism.

1.1.3 Power in the SADC region

Africa has endured the historical experience of colonisation, which has left enduring impacts across various facets of its socio-political and economic landscape. After gaining independence from colonialism and white minority regimes, African countries have suffered inequality that are in some ways overlapping, and in others diverging, depending on the context (Gumede, 2013). This power imbalance supports ideas that centre or benefit the global North, while reifying a wide variety of materialities such as rules, architecture, and cultural products.

Even though this is the case, African countries were not entirely free from their own forms of hierarchies and power structures before colonisation. In her paper, Schoeman (2002: 1) argues that politics instead of economic consideration determined the establishment and function of both the SADCC and the SADC and that these politically driven processes have had impacts on the development of the Southern African region. Though the SADC member states are mandated to function together, these countries have different ways of doing things at political, social, and economic levels – which includes the power relations that are at play in each country. For example, in Malawi, power relations have influenced and structured the national Information and Technology Communication implementation (Makoza, 2017). In this regard Mokoza (2017) argues that the exercise of power not only

causes power dynamics to shift among various stakeholders in Malawi but also influences the entire process of policy implementation.

The way institutions are structured, how collaborations are formed, how policies are coordinated, and how oversight is conducted, are affected by this changing power relationship. This is highly suggestive of the relationship power and technology has in a country. In Botswana, a study by Lenao (2017) shows that the state remains a powerful player in the process of decision-making in instances where local communities are supposed to be part of the main key role players. Moreover, it is suggested that the formation of local management structures that are meant to advocate and balance communities, is a mere duplication of power structures that intensified community disempowerment under colonialism.

One of the main objectives of the SADC is to integrate the member states, a contentious idea. In 2018, South Africa had the largest economy among all the member states and was technologically advanced, in contrast with many other member states (Low-Vaudran, 2017). The projections of global power capabilities among SADC countries show what is most likely to happen by 2040, using the International Futures (IFs). The projection shows that Angola will be the only country approaching South Africa, but the latter will still wield more power potential. Secondly, Tanzania is expected to have notable power capabilities. This projection is attributed to the country's rapid population growth, which can potentially contribute to factors like economic expansion, a larger workforce, and increased regional influence (Low-Vaudran, 2017).

Some of the key findings of the policy brief – Power and influence: identifying champions of change in SADC[5] – show that: 1. Over the years SADC has built up considerable technical expertise in supporting economic development as well as peace and security. The challenge is to ensure implementation. 2. From a South African perspective,

[5] "This policy brief explores the notion of power in the Southern African Development Community (SADC). It examines which countries have excelled in areas prioritised in SADC's common agenda, which is shaped by the revised Regional Indicative Strategic Development Plan (RISDP). Recommendations are made about how South Africa might partner with key SADC countries to drive growth and development in the region" (Louw-Vaudran, 2019: 1).

decentralising power and encouraging partner states to play a greater role will be a major challenge (Louw-Vaudran, 2019: 2).

Butts and Thomas (1987) argue that there is an imbalance in the region, in view of the leverage that South Africa has. Subsequently, Mapuva and Muyengwa-Mapuva (2014) state that the following challenges are hindering regional integration: overambitious targets, overlapping and concurrent memberships, the heterogeneity of SADC economies, the co-existence of SACU and SADC, different levels of economic development and failure of a collective justice system (Case of the SADC Tribunal, rules of origin[6]).

As a result of these challenges, there has been inequality in terms of ranking between member states. For example, South Africa can be regarded an as emerging power in terms of Sven Biscop and Thomas Renard's seven dimensions of state power (Nilsson, 2020: 1). The seven dimensions of state power involves that so-called 'great powers' which are countries that have succeeded in the establishment of favourable conditions in the seven dimensions of power, namely economy, diplomacy, military, resources, culture, population and geography. These dimensions encompass various aspects and factors that contribute to a country's overall power and influence (Nilsson, 2020: 1). The resultant scaling and creation of disparities also exist within countries between elites and ordinary citizens, which can be attributed to factors such as social class, gender, age or the level of access to decision-making processes (Gumede, 2013). Technology lies at the core of these dimensions, occupying a central position in shaping power relations and relationships.

1.1.4 Michel Foucault: Power

Michel Foucault (1926-1984) is a French historian and philosopher primarily known for his work on the relationship between knowledge and power, and how they are used for social control (Gutting & Oksala, 2022; Schwan & Shapiro, 2011: 1). He also attempts to

[2] These will be discussed in Chapter Two.

expose the harmful impacts of what he referred to as contemporary technologies of power (Behrent, 2013: 54). Foucault followed three methods in his work, namely archaeology (which is concerned with discourse), genealogy (which concerns power), and ethics (which focus on subject and subjectivity). This study will focus on Foucault's insights because it lays a foundation for establishing meanings and evaluations for understanding society and the rise of contemporary subjectivity (Gutting, 2013). Foucault's approach outlines the intimate bond between knowledge and power, and how power has been used to allow societies to function.

1.1.4.1 Definition of power

Power is commonly approached and understood in terms of political theories which deal with the submission to constituted authority and law (Peter, 2018: 16). In contrast, Foucault develops a different theory of power; a theory that looks at power as a relation that exists at every level of society and forms micro-powers, and which sees power as present in all human relationships. As such, power is a fundamental basis for understanding human nature (Foucault,1977: 23). By micro-powers Foucault means small scale powers that form at the lowest levels of human relations as compared to powers such as sovereign power exercised by governments.

Foucault expands on this as he outlines five characteristics of power, namely: 1. Power is not a static thing that can be owned, taken away, or given away, but it is rather exercised through different relationships; 2. Power is not external to human relations such as economic processes, knowledge relationships, and sexual relations, but it is immanent of these relations; 3. Power does not encompass a top-bottom approach, it rather exists at all levels of societies; 4. Power is intentional and non-subjective; and 5. Power is resistant and non-external (Foucault, 1988: 94).

Foucault (1978: 92) therefore defines power as "the multiplicity of force relations immanent in the sphere in which they operate, and which constitute their own organization". This means that there are different types of power dynamics that exist in a specific sphere and that these dynamics create their own structure. Moreover, power is a

system of force relation, and it is permanent, repetitious, inert and self-producing. This means that the force relation endures through various features of social life that are constantly reproduced and do not change. Power acts as a means of communication and interaction that shapes how we think and it also entails a broader phenomenon that shapes our understanding of the world (Peter, 2018: 19). In this regard, Peter (2018: 17) argues that the metaphysical view of power is the ability of the body to experience change.

In his books and lectures, Foucault distinguishes between different forms of power, namely pastoral power, sovereign power, power-knowledge, disciplinary power, and biopower (Foucault, 1977; Foucault, 1978; Peter, 2018: 17). The primary focus of this study will be disciplinary power, since it describes how subjectivity arises in the relations of power.

1.1.4.2 Disciplinary power

Disciplinary power refers to social discipline and conformity. It is found in institutions such as schools and prisons, where the mechanisms at play focus on norms concerning bodily conduct rather than demanding force and violence (Peter, 2018: 19). Foucault argues that we must redefine the concept of power as the fundamental principle that may drive both the improvement of the penal system to make it more humane, and which may lead to a deeper understanding of human nature (Foucault, 1977: 23).

Foucault further argues that there has been a transformation from sovereign power to disciplinary power (which is characterised by the idea of the panopticon) (Peter, 2018: 17). According to Philpott (2020), sovereignty refers to “supreme authority within a territory”, and Foucault (1977: 53) argues that it was through this power that punishment was carried out, as the sovereign has power to directly or indirectly make penal demands. According to Foucault (1977: 176), modern power works in two important ways: Disciplinary power is (1) a network of relations that fluctuates from top to bottom and vice versa, and (2) it works like a machine because it is not possessed as a thing. In outlining the transformation from sovereignty to disciplinary power, Foucault’s “primary objective

was to provide a genealogy and a critique of the way modern societies control, sanction and discipline their populations" (Peter, 2018: 17). One of these ways is through his explication of panopticism. Panopticism refers to social control whereby individuals regulate their behaviour because they feel that they are being watched even if they are not (Mungwini, 2012: 344; Foucault, 1977: 197).

1.1.4.3 Foucault's concept of power, technology and Africa

According to Foucault's view of power, power does not encompass a top-bottom approach, and it is expressed through different relationships. With the technological challenges facing Africa, it is vital to assess Africa's stance on the relation between technology and power. The intrinsic connection between technology and power suggests a need for inquiring into how the latter unfolds within African society. This connection has been overlooked firstly in different fields of study, including the philosophy of technology. Reasons for this exclusion are, among others, that philosophy of technology is an emerging field of study and was not considered a field of inquiry before the 1970s (Swer & du Toit, 2020: 231). Therefore, Philosophy of Technology continues to be marginalised (Kroes & Meijers, 2001; Bouabdeli, 2024). Moreover, technology has been perceived as an area within scientific field of study and is often excluded from philosophy, because philosophy has been perceived as a theoretical field of study that deals with 'higher' forms of knowledge (Bouabdeli, 2024). Secondly, most research has been focused on both the negative and positive impacts of technology on human life, and the environment, with the key themes being the evolution of technology, technological phases and the impact of technology on society (Mazzeo, 1987; Buchanan, 2022). Thirdly, power has been mostly studied from a political point of view because the focus was on major states and empires and involved types of power such as authority (Lynch & Hoffman, 2020; Munro, 2024). This study will assess the state of technological advancement and power in Africa from the perspective of Foucault to generate new insights into the contemporary situation by expanding on each of these aspects.

1.2 Research questions

What does a Foucauldian perspective reveal concerning the relationship between power and technological development in contemporary Southern Africa?

1.2.1 Sub-questions

1. What are the technological challenges facing Africa in the contemporaneous world?

2. What is the nature of the relationship between technology and power, according to Foucault?

3. How does Foucault's theory of power allow us to elucidate the relation between contemporary technological development and power relations in Africa?

1.3 Hypothesis

Contemporary Africa is characterised by coloniality and post-coloniality. De Lissovay and Bailón (2019: 83-84) state that, even though colonisation has ended, we now continue to live in times of coloniality, which is the pattern of power that emerges from the invisible part of history and encompasses political, cultural, epistemological and symbolic conditions in the region. In this regard, Mbembe (2008) describes how post-coloniality as a force is incapable of transformation. The incapability of transformation embedded in post-coloniality is evident in the existing disparities between the Global North and the Global South, such as unequal technological advancement that is directly related to power relations. In the context of Africa, the application of Michel Foucault's theories on power and technology suggests that power dynamics, such as disciplinary power, significantly influence and shape contemporary technological challenges, to thereby impact their adoption, implementation and outcomes.

1.4 Research aim and objectives

1.4.1 Main aim

To assess the technological advancement in relation to power in the SADC region.

1.4.2 Objectives

1. To investigate contemporary technological developments in Africa.

2. To describe the Foucauldian perspective on power, with the aim of examining the relationship between technology and power according to Foucault.

3. To discuss the interrelation between technology and the Foucauldian power perspective in the SADC region.

1.5 Chapter outline

Chapter One: Introduction and contextualisation

Chapter Two: Technology in the Southern Africa Development Community region

Chapter Three: Michel Foucault: Power

Chapter Four: Technology and power in the SADC region

Chapter Five: Conclusion

This study will focus on technology, policies and the application thereof in terms of Foucault's concept of power. In the next section I will sketch the context of Africa (specifically SADC) in this regard.

Chapter Two: Technology in the Southern Africa Development Community region

2.1 Introduction

It is vital to understand the history of technology in the context of Africa, because of the perceptions and the effects of colonisation. It is also important to understand the roots and transitional stages of the contemporary technological advancements. Studying the history and evolution of technology (pre-colonisation, during colonisation, and post-colonial) is important because it gives an understanding of technological advancements not merely as tools but as embodiments of power relations and how that has played out in societies from generation to generation and shaped knowledge.

Technology is key to the policies of different countries as a tool for development. Technology, policies and philosophy are intertwined, because philosophy underlies policies through foundational principles, guiding values, critical thinking, moral responsibility and adaptation to change. Philosophically, policies are a foundation of social contracts, ethical frameworks, justice and fairness as their aim is to achieve human flourishing. Technology is an issue that is open to philosophical deliberation, and it also plays a crucial role in various sectors such as the economy and education. Therefore, philosophy offers a foundation of guidance and direction, accountability, efficiency and effectiveness with its fields such as ethics toward technology and its policies. According to Bouabdeli (2024:15), “applied philosophy of technology can enrich the conceptual and normative aspects of technological design and policymaking”. African space for technological innovation is driven by challenges and opportunities. This chapter discusses the history and current state of technology in Africa and the SADC region.

2.2. The phenomenon of technology

Technology has been developed by humans since the dawn of our history, and it intersects with humanity’s social needs, natural resources manipulation and the ethos of humans as well (Buchanan, 2022; Kendal *et al.,* 2011: 788; Peter, 2015: 14). Examples

of the earliest technology are the first tools, such as sharp flakes of stones that were made 3.3 million years ago in Kenya (Gregersen, 2019).

Humans may thus be described as a technological species, or Homo Faber. Hannah Arendt and Max Scheler articulate the notion of Homo Faber to describe this character of the human species. Homo faber means “humans as the maker”, and the term was coined by Appis Claudius Caecus (Tönsing, 2017). According to Arendt, work – in contrast with the naturalised aspect of labour – involves creating an artificial world that endures beyond its creation. This forms a distinct human realm where individuals function, like builders and legislators, to shape both physical and institutional landscapes (Yar, 2024). Therefore, these philosophical perspectives contribute to an understanding of the human as closely linked to the phenomenon of technology through the concepts of labour and work.

Moreover, the phenomenon of technology is central to Philosophy of Technology’s field of study because “technology compels us to critically reassess the defining features of reality, knowledge, and perception and the possible connections between these notions” (Bouabdeli, 2024, 15). It is because technology, as tools, artefacts and processes, an opportunity and a challenge is embedded in the human existence and has been defining human societies and that the problems of technology need to be addressed. These problems fall roughly into three categories; those related to technology as a systematic body of knowledge, to technology as a system of (material) artifacts, and to technology as a form of action and practical rationality” (Audi, 2015:825). Technology and humans are epistemologically intertwined, technology forms part of what knowledge is and humans are the subjects and entities that carries that knowledge and transforms it into artifacts, thus *Homo Faber*.

2.3 Historical perspectives

2.3.1 Pre-coloniality

Technology is a developmental necessity, but there are certain unique challenges that emerge when technology in the African context is investigated. Descriptions of pre-colonial technology use and technical innovation in Africa, as well as broader cultural histories, are scant because Africans relied on oral accounts rather than formal documentation. Furthermore, colonisation served to disrupt or destroy many of these oral accounts that stretched back to earlier generations, by disregarding them and enforcing colonial power (Khumalo, 2019).

Pre-colonisation Africans might also have used alternative terms to describe *technology*. For instance, there exist accounts of traditional technical methods in literature, but there is no record of the exact names that were used to refer to technology at large. Rather, authors like Mudimbe (1988) and Ndasauka (2024) argue that this lack of literature may be a result of colonial powers that did not document and recognise indigenous terminologies and technical practices. The prevalence of oral traditions also suggest that knowledge may have been lost. As a result, scholars whose interests are in technology and in colonial and post-colonial studies in Africa, are faced with an ongoing challenge of presenting the voices of those who had been the victims of colonialism, whose voices had rarely been documented (Moon, 2010: 189).

There have been indigenous knowledge and practices that were neither static nor frozen. Traditional technological inventions transitioned with the needs of societies, who made new tools as different needs arose (Barua, 2010: 63; Shizha, 2016: 47). Some of the earliest technical inventions and toolmaking have been traced to Africa, such as the *oldowan* – a style of stone tool that was trimmed roughly on one edge to make a cutting edge, and which first appeared in East Africa (De la Torre, 2011: 1029).

The oldest African technological inventions include the discovery of fire, of which the evidence was seen in burnt bones and oxidised patches of earth (Eluozo, 2019: 81; Hirst, 2023). Other inventions include the use of numbers, production and the use of baskets (Eluozo, 2019: 81). These pre-colonial technical developments are observed across the

continent. For example, in Nigeria there were processes of textile weaving, spinning, and dyeing (Onimode, 1982). In Southern Africa, the impressive architectural structures found in Great Zimbabwe (such as the Hill Complex) provide evidence of the scientific and technological expertise employed by the Shona people. In South Africa, these inventions include copper production in Messina and Phalaborwa (Hammel *et al.,* 2000: 50).

Gyekye (1995: 121) argues that technological innovations in pre-modern Africa were overlooked because Africans did not embrace or have exclusive scientific knowledge to realise that their techniques were of scientific and technological merit. He believes that Africa can foster development by integrating traditional cultural values with modern technology and that progress can be achieved when technology does not undermine cultural identity and societal values (Gyekye,1995: 141).

In contrast, Shizha (2016: 49) contends that technology is a catalyst for social growth and is defined and perceived differently based on social and cultural context as well as the purpose for which it is created. In essence, they knew and understood the purpose of those tools and techniques because technology is more effective when it is culturally appropriate (Shizha, 2016: 50). Moreover, technology exhibited a location-specific nature tailored to harnessing local resources or utilising the skills available and thus contributed to the improvement of living conditions for the local population.

Technological innovations were also meant for a communal benefit rather than the individual, particularly in order to show humanity to others, because through Ubuntu[7], societal wellbeing was achieved (Shizha, 2016: 52). The traditional tools that were made were share among within communities, they were not used by only the person who made them. This suggests that the transformative journey of technology in Africa differs per country and is specific to societies. For example, Southern Africa has different experiences in this regard from the Northern African countries and this was influenced by differences in environmental adaptations, cultural influences and material use. Philosophically, this refers to cultural relativism which is a belief that individual's values and practices differs and must be understood in each person's own culture (Nickerson,

[7] The interconnectedness of an individual with a community (Mangena,2025).

2023). Southern Africa boasts a rich and diverse history spanning over three million years, encompassing the evolution of human beings and their ancestors.

2.4 The impact of colonisation on African technology

The African continent was mainly colonised by European countries, including Britain, France, Germany, Belgium, Spain, Portugal and Italy. France and Britain emerged as the predominant colonial powers in Africa, commanding over two-thirds of the continents' territories prior to World War I and expanding their control to more than 70 percent following the war (Khapoya, 2012: 99). The Portuguese were the first to enter Southern Africa (Moyo, 2020: 110; Marks, 2024). The process of colonisation enormously impacted the traditional culture of the Africans. One of the main impacts of colonisation in Africa was the disruption and reorganisation of traditional societies and political structures (Ocheni & Nwankwo, 2012: 53). Colonisation reshaped the native African power structures and resulted in new power relations and perceptions. For example, kings or leaders were responsible and responsive to their subjects in the pre-colonial setting and had certain rules, but this changed during colonisation (Igboin, 2016). The aim of colonisation was political domination and exploitation. This domination was intentional and is associated with imperialism that resulted in African people being politically, socially and economically conquered and enslaved (Ocheni & Nwankwo, 2012).

According to Shizha (2016: 48), European colonisation disrupted and dismantled the established social relationships of production and impeded the progress of indigenous technological development. These disruptions became evident in the state of technology of the African countries during colonisation and were influenced by the emergence of the Industrial Revolution, which brought about drastic changes in the socio-economic transformation and technology (Ocheni & Nwankwo, 2012: 47). The industrial revolution is a period in history when major mechanisation and innovation began in Great Britain and happened during the mid-18th and early 19th centuries and later spread across the world (Chen *et al*, 2024). Moreover, colonial powers had colonial missions (Khapoya, 2012: 101). The three reasons for the Europeans to explore the African continent were evangelical exploration, exploitive exploration and to acquire scientific knowledge of

"mysterious" Africa (Mazrui, 1969: 662). They called it the Dark Continent and geographers, anthropologists and scientists flocked to Africa to explore it.

Through the Industrial Revolution, colonisation classified the role of Africa in the world's economy as that of production of primary goods and agriculture, ignoring its technological developments. For example, in the SADC region, the primary focus of colonial powers was on extracting resources to fulfil the needs of their home countries (Moyo, 2020: 110). As a result, the SADC, much like many other regions in Africa, has been predominantly characterised by the production and exportation of commodities, a process known as *extractivism*[8]. Through colonialism, natural resources such as oil and minerals were extracted and exported from Africa; and the global North has accumulated wealth through this (Acosta, 2011; Gudynas, 2010; Pereira & Tsikata, 2021). As a result, colonisation delimited industrialisation in Africa. Therefore, the developmental path of the SADC region has been significantly influenced and moulded by the actions and agendas of the colonial powers because the economy of most African countries is still dominated by extractivism (Greco, 2020). Moreover, African technologies during colonisation were restricted, to prevent Africans from exploiting and maximising exported goods and the capital of the colonisers; and to keep up with production through colonial technology because African technology was deemed unprogressive (Ocheni & Nwankwo, 2012: 48).

Colonisation dispersed and disrupted traditional African technical tools, skills and knowledge, thereby creating a perception that Africans did not have technical know-how before colonisation (Khumalo, 2019). Colonial powers established centralised systems with different influence and power to manage their colonies (Katuu, 2015). For example, power was exercised through authority structures, and this resulted in factionalism. This relates to the notion of Foucault that power is exercised through social structures and institutions which produce divisions and manage control over populations (Foucault, 1977). This abundance of knowledge is also because of the different (and often violent) forms of recordkeeping that the colonists employed, such as land surveys, which further served to disrupt the oral indigenous knowledge.

[8] This term refers to the extraction of natural resources (Veltmeyer, 2023), but also entails the extraction of labour and cognitive capacity (the latter in terms of contemporary digital technologies, for example).

The perception that Africans did not have technology before colonisation is also due to the different conceptual approach to technology between the African paradigms and those of the colonisers (in the West, technology often took the form of a calculative rationality). There is a vast difference between African skillsets, which are practical, and the coloniser's calculative rationality, which emphasises control and efficiency at the expense of critical and reflective thinking (Adorno & Horkheimer, 1944: 70). Colonial powers' notion that Africans did not have technical skillsets, was invalid, because their focus was on exercising power, and they overlooked indigenous methods. Thus, Wiredu (1976) argues that while the Westerners perceive African indigenous methods as non-scientific and solely related it to traditional African belief, they seem to be blinded by their own non-scientific thought and delimited approaches to the potential of technology. The focus of colonial powers was on efficiency, measurement and control through their technological means.

2.5 The Technological landscape of post-colonial Africa

After colonisation, technology in Africa has become a mix of both hope and challenges. It is a form of hope because it brings change through innovation and advancement, and it is a tool for solving a number of social problems and empowers humanity. Kachieng'a (2009) states that even though many African countries gained independence, they remained dependent on their colonial masters. As a result, these countries are "technology colonies". *Technology colony* refers to a situation where a country has gained political independence but still depends on developed countries for technological advancements and innovation (De Wet, 1999). According to De Wet (1999), being a technology colony is not inherently negative. He argues that it is important to avoid being entrenched in a situation but rather presents an opportunity to be managed (De Wet, 1999). Countries that are technology colonies can use the opportunity to expand their development through the relations they have with developed countries, though this needs to be done with caution and by ensuring transparency and mutual benefiting.

It is also challenging because of its ethical dilemmas, environmental impact and its reinforcement of social inequality. It therefore necessitates an inherent resilience,

adaptation, and aspirations for self-determination. This section discusses the complex interplay between historical inheritance, contemporary challenges, and future potentials, and the dynamics that shape and define Africa's journey towards technological sovereignty and socio-economic advancement. Colonial structures still echo the technological landscape which policy reform in Africa strives to address, and efforts to change these narratives in the post-colonial era requires a philosophical repositioning in terms of technological innovation and policies, with a clear understanding of how technology affects power relations.

Africa has established unions and policies such as the *African Union Agenda 2063* that are aimed at developing the continent. The issue is therefore with the implementation of these policies. According to Hirsch and Lopes (2020), Africa's development is hindered by weak democratic institutions, disconnected leadership, corruption, and overemphasis on economic growth that does not lead to meaningful structural reforms. Therefore, the objectives of these policies cannot be easily achieved until "countries establish institutions that are capable of balancing and resolving competing political interests" (Hirsch & Lopes, 2020).

Kinyanjui (1993: 276) perceives the political independence gained in Africa after colonisation as coupled with backwardness in terms of science and technology, because African governments maintain systems that promote control rather than development. He further argues that the failure to develop Africa in the post-colonial era cannot be blamed on colonialism, imperialism, or natural calamities, but that national governments and post-colonial leaders must acknowledge and assume their fair share of responsibility for the current crisis affecting the people (Kinyanjui, 1993: 291). For example, there still exists economic dependence that was established during colonisation through the extraction and export of natural resources.

Conversely, Ndlovu-Gatsheni (2013) states that certain power structures, such as economic systems[9] and social hierarchies[10] are continuing a colonial matrix in Africa, while Van Stam (2021: 714) argues that Africans are brainwashed because, under the

[9] Systems of export that are based on extraction of resources.

[10] The existing ethnic, racial and class divisions.

pretence of enhancing security, imported techno-social systems are being increasingly imposed on Africans. Ndlovu-Gatsheni (2013) uses an example of academia as a system of power. He states that these systems are rooted in the structures established during colonial times. These systems often prioritise certain dominant ways of thinking and knowing, which can marginalise other perspectives, such as African epistemologies and maintain unequal power dynamics through dominance of Western paradigms. This aligns with the idea of calculative rationality and overrides the indigenous knowledge because Western rationality is used as a primary tool for achieving end results of domination (Adorno & Horkheimer, 1944, 78). Eurocentric scholarship prioritises Western knowledge production and this also influences the development strategies in Africa (Jones, 2015). Thus, the quest for decolonisation of African knowledge and way of life. Belfi and Sandiford (2021) define decolonisation as "cultural, psychological, and economic freedom for indigenous people with the goal of achieving indigenous sovereignty – the right and ability of indigenous people to practice self-determination over their land, cultures and political and economic systems".

Conversely, Quijano (2008: 204) coined the term *coloniality* and contends that it is a pattern of power that emerges from an invisible part of history and encompasses political, cultural, epistemological, and symbolic conditions. This notion implies that even though colonisation has ended, its left-behind crumbs perpetuate Africa's technological crisis through global capitalism. One of the reasons Africa is faced with technological challenges is that Africans have relinquished their extensive indigenous science and technology, which evolved over countless centuries in the wake of colonialism (Peter, 2015: 14).

2.6 Technological challenges in Africa

According to the UN (2021: xx), common technological challenges facing developing countries include lower technological and innovation capabilities, slow diversification, weak financial mechanisms and intellectual property rights, and technology transfer influenced by economic inequalities. One example of some of the technological problems facing Africa in the post-colonial era is limited internet connectivity in Kenya. Kenya is

faced with Information and Communications Technology (ICT) challenges which include insufficient ICT platforms – old computers, poor internet connectivity, and unskilled personnel (Onyango & Ondiek, 2021: 511). These challenges have philosophical implications because they affect African technological sovereignty, knowledge production and epistemic justice, negatively impacting technological autonomy and the liberatory potential of technology in society such as the condition of wellbeing, *eudaimonia*.

These challenges raise questions of equality between African countries and between Africa and the global North. For example, the digital divide challenges us to consider the fairness and ethical consideration. Specifically, some regions have access to technology while others do not, yet African values contend for humanity to others, in the form of Ubuntu. Uleanya (2020: 3253) states that "collective efforts are needed for survival and positive response to the disruption of the 4IR[11]". Okyere-Manu (2021) argues that some imported technologies were designed and produced for a different setting, and this often clashes with African ethical values. This also results in knowledge exclusion because according to Foucault (1977), knowledge is a form of power and those who control knowledge, shape the governance structures of society, as well as individual access to to those structures, which includes knowledge structures. Individuals without access to technology are excluded from the knowledge economy and this limits their opportunities for education, employment and social participation; and this is why the gap keeps widening (Moss, 2002).

Adding to these challenges is the poor investment in digital platforms by government institutions. ICT challenges differ per country in Africa, but these differences are encompassed by the digital divide. The *digital divide* refers to the "gap between demographics and regions that have access to modern information and communications technology" and those that do not (Hanna, 2021). For example, South Africa is the country with the largest ICT market in Africa (ITA, 2023). Even though this is the case, there are disparities within the country because the use of and access to ICT in rural areas and urban areas differ. The digital divide in South Africa is indicated by Statistics South Africa's (2022: 46) general household survey of 2021 that shows that 25.9% of the

[11] 4IR stands for Fourth Industrial Revolution which refers to the ongoing technological transformation in the 21st century (Schwab, 2017).

Western Cape's households have access to the internet whereas only 0.2 % of households in rural areas of the Eastern Cape have access to the internet. The gap is also exacerbated by lack of skills among many individuals, which limits their ability to fully participate in and benefit from the digital economy.

Other challenges include, for example, inadequate power infrastructure in Nigeria. There are frequent power outages as there are challenges in generation, transmission and distribution, leading to unreliable electricity supply (Nwokoye *et al.,* 2017). Ethiopia is faced with insufficient health care technology, and Manyazewal *et al.* (2021) argue that the improvement of this technology could improve the Ethiopian health sector in its entirety. In Ghana, there is an e-waste management crisis as there are inadequate recycling facilities which pose environmental and health risks to the local population (Oteng-Ababio, 2012). E-waste refers to the electronics that are no longer working, unwanted and discarded (Gartner, 2025). In Southern Africa, due to poor water purification technologies, Zimbabwe is faced with limited access to clean water, which causes waterborne diseases and other health issues (Musemwa, 2021).

2.7 Contemporary technological progression in Africa

Technology has tremendously evolved across the world; from prehistoric technology, the agricultural revolution, ancient technologies, the Industrial Revolution, the electrical age, and the information age, to mobile and wireless technologies. We are now entering the Fourth Industrial Revolution, which is inclusive of 3D printing, autonomous vehicles, robotics, quantum computing, artificial intelligence, biotechnology, cyber-physical systems, fifth-generation wireless, industrial internet of things, the internet of things, and nanotechnology (Schwab, 2017). Collier (2019) states that different sections of the world have contributed to these technological developments. He notes that Europe, the USA, and Japan specialise in knowledge industries, East Asia in manufacturing, South Asia in services, the Middle East in oil, and Africa in mining.

Even though Africa is faced with various technological challenges along with colonial after-effects, there has been progress with the acquisition and use of contemporary

technology. Colonisers brought with them technology and versatile machinery to Africa which promptly derived significant benefits for the colonising force, propelling the continent's progress in establishing new businesses and constructing industries that often did not benefit the local populace (Dimkpa, 2015: 13). For example, this technological assimilation is evident in South Africa through infrastructure such as railroads and sewage systems that indicate how African infrastructure projects were rolled out after colonisation. The railroad infrastructure played (and continues to play) a vital role in South African globalisation and the international economy because it led to the boom of diamond exportation (Fourie & Herranz-Loncan, 2015).

This example of railroad infrastructure outlines how the capabilities and resources available in different regions of the world that could be used to form an equilibrium for coexistence and equality around the world, how African countries help other countries across the globe through exports. Even though this is the case, there are challenges of imbalance in regional integration, for example uneven distribution of resources in West Africa, which result in clashes and inequalities. According to the UN (2021, xiii), inequalities between countries started during the Industrial Revolution because before then, people had limited means of living. However, with technological change, inequalities accelerated resulting in the great divides – the global North and the global South, developed countries, developing countries and underdeveloped countries. This is problematic because this categorisation is defined by the West. After the Industrial Revolution, Western Europe went from strength to strength, rapidly developing, while other countries remained behind. As a result, core and periphery nations developed, according to World System Theory.

World System Theory entails "a socioeconomic approach that explains the economic development and dynamics of capitalistic world economy analysing the mechanism of international market trade, economic division of labour between core and periphery regions, and interests of capitalist class markets" (Coccia, 2019). The theory categorises world regions as core areas (which are areas that are technologically advanced and industrialised), periphery areas (which are poor areas that survives by exporting their primary products) and lastly semi-periphery areas (which are areas that act as periphery to core, and core to the periphery area, in-between the first two categories) (Drew, 2023).

The inequalities also exist within continents and countries, and as a result, this lays a foundation of how technological progression in the contemporaneous world takes place. Therefore, the gap between regions keeps widening, but there is progress within African countries in keeping up with the continuous developments in the technological spheres. This progress is evident in the proliferation of emerging technologies throughout the continent, such as drones, smart cities (Nairobi), and transportation (Gautrain). This benefits the continent in various ways such as by improving government revenue, fostering peace and stability, and prosperity (Allen, 2021). These benefits were also seen during COVID-19 as different countries employed emerging technologies to fight the virus. Allen (2021) states that the legacy and sustainability of these technologies depend on how they are used. African countries need to seize the opportunities and limit the risks of these technologies because doing so could yield greater peace and prosperity. Even though this is the case, many countries are still at risk of falling behind in this transformative shift.

The compelling narratives about progressive technological developments in Africa include Africa's first high speed train, the Gautrain in South Africa, and the founding of the LifeBank in Nigeria by Temie Giwa-Tubosun in 2015 (Trelstad, 2020). Temie founded an online platform that allows hospitals to connect with local blood banks to buy blood and deliver it using a dedicated team of riders available 24/7. This bank was founded as a response to the maternal deaths in Nigeria that were caused by blood shortages. According to Faheem and Dutta (2023), this innovative venture creates a sustainable and efficient future for health care in Africa, powered by technology.

Africa has experienced challenges (some of which relate to colonialism) and continues to make progress in technological developments (of which the establishment of the SADC is reflective in Southern Africa). On the 17th of August 2008, the SADC passed a *Protocol on Science Technology and Innovation* with the aim of fostering cooperation and promoting the development of science and technology in the region (SADC, 2022). SADC member states devised their *Science Technology and Innovation (STI)* policies. For example, in 1998 Botswana adopted a *National Science and Technology Policy*, which was replaced by the *National Research, Science, Technology* policy in 2011 (UN, 2023: xiii).

These policies require monitoring and evaluation, and one of the tools that can be used is the Ibrahim Index of African Governance (IIAG). IIAG is a framework that refers to “the provision of political, social and economic public goods and services that every citizen has the right to expect from their government, and that a government has the responsibility to deliver to its citizens” (MIF, 2020). This tool evaluates and tracks governance performance in African nations and the index has at its foundation economic opportunity as an indicator. This indicator focuses on the public administration, business environment, infrastructure and rural sector, which are key to technology and innovation. Philosophically, monitoring and evaluation is important as it allows for continuous improvement, effectiveness, and responsiveness towards the technological challenges that threatens human flourishing, existence, and fairness. It is one of the tools to bring about a fair and just society that philosophers like Foucault advocated for.

These policy efforts are foundational for philosophical arguments about governance, justice, authority and the role of the state. Such consideration entails a nexus of philosophical principles such as utilitarianism, libertarianism, communitarianism, Marxism, and Rawlsian Justice, the consideration of which are vital in decision making and shaping societies. For example, communitarianism contends for the community’s collective involvement in technological development rather than a focus on individualism, which is important for regional integration and can result in forms of communitarian technology (Dotson, 2015).

2.8 Newer ways of thinking about technology

From the discussions above, it is evident that technology is a double-edged sword, in that it may be a threat and a solution, or a *pharmakon*, as Stiegler (2013) calls it. A pharmakon can be defined as both a cure and a poison, and it refers to the technical tools which we use to open a new future for ourselves. These technics are what makes life worth living in spite of suffering (Stiegler, 2013). Though Africa suffered colonialism, history has moved on, along with rapid technological advancements since the Industrial Revolution.

Therefore, Africans need newer ways of thinking about technology, ways that will contribute to the development of the continent and combat the global inequalities facing the continent. According to Wiredu (1976), development entails more than visible objects. Africans must begin with their intellectual foundations and not discard their heritage in pursuit of a Western way of life. The path of new ways of thinking has begun in Africa and I see African Renaissance theory as one of the markers of progress in this regard. African Renaissance is the call for re-awakening of the African continent, with the aim of social cohesion, growth development, promotion of values and ethics, which will position Africa in global affairs (Daudu & Asuelime, 2019). These newer ways must not be only lip service but instead must be converted into policies. Implementation must be a priority.

2.9 Typologies of technology

There are typologies of technology that critically broaden the understanding of technology. The four typologies of technology and philosophy are technological anarchy, which is “the philosophy that technology and technical knowledge are good as instruments and should be pursued in order to realise wealth, power, and the taming of nature”. This philosophy was dominant in the 19th century industrial development and is rooted in individualism and opportunism that encourages rapid techno advancement and diversification. It advocates for markets to determine technologies that will prevail and minimal government regulation (Drengson & Onal, 2020).

The second type is technophilia, which refers to “the love of technology”. This love makes humans deeply identify with technology and turn tools into the extensions of themselves; and this blurs people’s objective understanding of technology’s impact (Drengson & Onal, 2020). The third typology is the fear of technology, technophobia. This fear comes as a realisation that technology can become uncontrollable and harmful and that only human value and ethical consideration have the power to prevent it. It is against technological autonomy and is for humans’ autonomy over technology. According to Drengson and Onal (2020), “an extreme reaction of technophobia attempts to technologize human life”.

The last typology is technological appropriateness, and it refers to the maturity stage of the relationship between technology, people and the world and is the last stage of technological development. Therefore, technology should be designed to preserve diversity, promote benign interactions between humans, machines and biosphere, operate efficiently according to thermodynamisym principles, balance costs, promote human development through their use (Drengson & Onal, 2020). Integration of these typologies in decolonising technological thinking in Africa can allow a balanced approach to technology. The typologies form part of the systematic body of knowledge in the realm of technology, they are foundational in developing new theories of technology of philosophy. For instance, technophobia embeds existential implications and affects the creation, adoption and use of technology, which has direct impact on the progress of development. Therefore, this typology intersects with the philosophical discussion of power, control, societal change because fear affects social structures, governance and individual freedom.

2.10 Conclusion

Contemporary discourses in Africa consider crucially the argument of decolonisation. Academia is one of the spaces where these discourses take place. For example, Ndlovu-Gatsheni speaks of academia as a system of power that still perpetuate colonialism. Efforts have been made to combat this continuing infiltration in institutions of higher learning in South Africa, as may be seen in the drive toward decolonising the curriculum by including indigenous knowledge systems in the curriculum.

As a result, wide research has been done on African philosophy, science, and technology (Uzomah *et al.,* 2013; Lauer, 2017; Bekele *et al.,* 2023). This research comes as a way of promoting the African way of doing things and moving away from colonial capture. Therefore, realising and promoting the Philosophy of Technology in the African context is also vital and will promote interdisciplinary research. As discussed in Chapter one, the philosophy of technology plays an important role in understanding technology in our contemporaneous world.

In exploring the technological development in the Southern African Development Community region, this chapter has discussed the historical perspectives of this development. It cannot be denied that the current state of the African continent has been greatly influenced by colonialism. Even though this is the case, it is important to note that Africa had technological developments before they were colonised. An account of this was discussed.

The impact of colonisation on the technological development in Africa and the SADC region was outlined. The colonisers had aims such as extractivism when they entered the African continent, and they injected their way of life into those of the Africans, thereby changing the social, political, economic, and technological landscape. The effects of the injection are still visible in contemporary Africa, which is faced with both technical challenges and opportunities. These challenges and opportunities differ per country. While some African countries, like South Africa, are making progress in ICT, others are still struggling.

To combat these challenges and tap into opportunities that exist in the technical space, SADC member states need to have newer ways of thinking about technology, and these include understanding African philosophy and African technology. The intersection of technology and philosophy in Africa develop new approaches that are localised and position Africa in global technological discourses (Ndasauka, 2024). Mavhunga (2017) suggests that African intellectual agents, creators and innovators need a deep understanding of Africa's cultural context in order to resonate with technology ideas and theories. Also, the potential of the philosophy of technology as a field of study should be recognised. It is also important to consider the role of power relations in the technological landscape of the SADC region. The next chapter will discuss Foucauldian perspectives in relation to technology and power.

Chapter Three: Michel Foucault: Power

3.1 Introduction

The history and future of technology use is closely related to power, as is evident in how colonialism has affected technological development in Africa. As discussed in Chapter 1, the rise of modern technology has stirred discussions about the impacts of technology, and one of those is power relations in a colonised space such as Africa. To understand and analyse the impact of technology in societies, one of the roles of the philosophy of technology is to study the political dimensions of technology, which involves power relations (Franssen, 2015; Hansson, 2015). Philosophers such as Michel Foucault, Thomas Hobbes and Max Weber have worked on the concept of power and have each developed their philosophies around these concepts. Max Weber argues that power is the ability to exercise one's free will even if there is resistance from others while Thomas Hobbes argues that power is the ability of an individual's present means to achieve good in the future (Munro, 2024; Sorell, 2024).

As outlined in Chapter 1, this study focuses on Michel Foucault because of his extensive works that analyse power, such as *Discipline and Punish: The Birth of the Prison* and *The History of Sexuality*, both of which are particularly influential. This chapter discusses Foucault's concepts of power and technology. Lastly, the chapter discusses Foucault and his post-colonial influence.

3.2 Introduction to Foucauldian perspective

The work of Foucault on power was influenced by his visit to Tunisia, Africa. In 1966, Foucault took three years teaching job at the University of Tunis, Tunisia and was teaching philosophy until 1968 (Medien, 2020). Tunisia was in its 10th year of independence from the French colonial rule and was under the authoritarian rule of President Habib Bourguiba during that time. Anti-imperialism and anti-authoritarianism were the core political stance during that time and Foucault, as a political activist, was involved in these movements (Medien, 2020). He hid fugitives in his apartment, and

compiled files of evidence for them and received beatings from police as a punishment for his actions. Foucault described the form of oppression he witnessed in Tunisia as intolerable and influenced by capitalism, colonialism and neo-colonialism (Foucault, 1991). This experience resulted in Foucault's extensive works on power. He states that "From all these different experiences, including my own, there emerged only one word, like a message written with invisible ink, ready to appear on the page when the right chemical is added; and that word is power" (Foucault, 1991).

While working at the university, Foucault used to speak regularly at Club Tahar Hadad, which was a cultural centre run by a Tunisian feminist Jellila Hafisa, and these talks envisioned the ideas of his work *The Archaeology of Knowledge* (Rice, 2007). The years Foucault spent in Tunisia were radical and transformative and led him to publish *Discipline and Punish* and the three volumes of *The History of Sexuality* (Medien, 2020). Medien (2020) remarks that "[i]t is within these works that we see Foucault, in philosophical terms, outline most concretely his theory of biopolitics, governmentality and power".

The methodologies central to Foucault's work are archaeology and genealogy. Genealogy refers to "the history of the present specifically concerned with the complex casual antecedents of socio-intellectual reality …" and differs from archaeology, which focuses on ideas that shape our reality (Gutting, 2005a). Genealogy traces ideas back to where they come from, questions them in the context of traditional interpretations of the topic, reinterprets them, and investigates how we can derive new ideas rather than just accepting new ideas (Bowma, 2007: 138). Foucault draws inspiration for his genealogy method from the Nietzschean idea that emphasised the role of power in shaping moral values and social norms (José, 2018). Foucault explored this idea further by applying it to power operations in various institutions. The central theme of Foucault's genealogy is the relation between power and knowledge, and his work exemplifies the characteristics of a modern author, his writings narrate his active participation in contemporary societal issues (Gutting, 2005a). Foucault's methods offer a comprehensive way of understanding the rapidly evolving technical world.

The concept of Power-Knowledge (pouvoir/savoir) is also central to Foucault's work which he introduced in the middles of his genealogical period of his work (Feder, 2014). The concept demonstrates how power and knowledge are inseparably linked because Foucault sees the relationship of power and knowledge as mutually constitutive, such that power relations are shaped by knowledge, meaning that "power decides what is knowable and by whom" (Raine, 2023). According to Foucault, we cannot speak of power or knowledge as separate; rather these are a "single, vast web of power relationships and systems of knowledge" (Fruhling, 2024). Within the web of power relationships are a web of complex beliefs that are accepted as truth or knowledge. Foucault (1975: 59) proposes that power "produces effects at the level of desire and also at the level of knowledge. Far from preventing knowledge, power produces it." He uses an example of physiology; the physiological organic knowledge is made possible by the power exercised over the body. Knowledge is founded and operates within systems of power relationships and that makes knowledge what it is, and generatable (Fruhling, 2024).

Foucault (1975) states that "the exercise of power itself creates and causes to emerge new objects of knowledge and accumulates new bodies of information". This means exercising power in a society, whether by government or different institutions, shapes and influences the society, because the power that is exercised, embeds knowledge. For example, power exercised in institutions of higher learning allows for identification and creation of different fields of knowledge, such as information technology, and this classifies as the creation of new objects of knowledge. Through information technology as a field of study, data is always generated and the establishment of technologies such as artificial intelligence (AI) is possible – this suggests that we would not have the fields of studies we have if it was not for power which is intertwined with knowledge. Therefore, power is effective, productive and we sometimes accept it because it does not suppress us; rather, it creates informed societies, creates pleasure, generates knowledge and shapes discourse (Foucault, 1975: 119). It is at the core of our existence and our epistemologies because the world exists through knowledge, therefore, power is not killing us, it rather makes life what it is. Moreover, it is worth noting that very often, life is not what it should be - as a direct result of the knowledge and power that is canonised and disseminated.

3.2.1 Foucault's concept of power

In focusing on the underlying structure(s) that governs knowledge and its acceptance, Foucault's concept of power is rooted in his quest to understand the history of knowledge (Gutting, 2005: 98). He considers power a productive force, as an alternative account to sovereignty and how power is traditionally understood (Baumgarten & Ullrich, 2016). This contention of power influences social sciences because it sheds insights on power and societal macrostructures (Baumgarten & Ullrich, 2016). An example of this is how social movements such as civil rights movements affect and transform societies over time. Therefore, power plays a crucial role in social change, as it initiates, directs and sustains change. Foucault urges societies not only to see power as negative and not to overlook the complexities of how power functions in modern societies. For example, when France transitioned from a monarchy to a democracy during the French Revolution, it occurred due to the people relating this to the attainment of freedom and reason (Pollard, 2019).

Foucault's *Discipline and Punish* expands his earlier inquiries into the modern structures of power and knowledge. Here Foucault analyses the history and evolution of the modern penal system by focusing on how power dynamics in societies shape punishment techniques over time (Foucault, 1977). The book discusses the changes in the human sciences that are linked to practices of discipline, surveillance, and constraint during the 18th and 19th centuries. The book is divided into four sections. The first section is *Torture*, and it examines how executions were publicised to serve as a dramatic display of state power and how torture was used as a method of punishment and control (sovereign power) (Foucault, 1977). Secondly, *Punishment* explores how forms of punishment transitioned to being regulated. The third section, *Discipline*, discusses disciplinary power, which controls individuals through surveillance and normalisation. The fourth section of the book is *Prison*, and it analyses the development of prisons and their role in modern society (Foucault, 1977). The book outlines how these four practices lead to new insights about people and also new methods to manage them (Gutting, 2005: 98). Foucault focuses on the scale and continuity of the exercise of power and sees power as a dynamic and constitutive force in society.

3.2.2 Characteristics of power

a. Power dynamic

As part of his work, Foucault rejects the reification of power and conceives power dynamically – as arising in human relationships in society (Gutting, 2005). Reification is the process of treating an abstract concept as if it is a real, tangible entity and involves attributing objective characteristics to something that was originally an idea, concept, or feeling (Mariano, 2024). This is a view of power that Foucault rejects, since power is always already inherent as part of social relations. His view of power is therefore on dynamism, which refers to processes that are not static but change over time (Heft, 2003). These terms outline the nature of social reality and the way we interpret the world around us – power infiltrates all these facets. For example, through the process of socially constructing power[12], medical conditions like mental illness are not merely reified but constituted as a discourse (affecting what may be said and what may not be said). The traditional view sees mental illness as a concrete condition, not as a condition produced by different social factors – power – as Foucault argues.

Therefore, Foucault argues that power is not something we can acquire, seize, or share; rather, it is something that circulates and is produced from one moment to another (Foucault, 1978: 93). According to Foucault, in contemporary societies, power is no longer about those in charge and those who submit (Landy, 2018). Rather, we are all channels that pass power from one point to the other and which are reinforced structurally. Humans construct, consume and internalise the norms of society, which are based on power. For example, in modern societies, most humans are technophilic – they have a deep affection for technology. This affection intensifies as technology is circulated and produced. Furthermore, humans consume and internalise the uses of technology, for example, the everyday life of an average South African who has access to a cellphone, is controlled and guided by it. They have the alarm telling them to wake up, and the calendar reminding them of the things they need to do on a particular day. As a result, technology has become

[12] Power being created and maintained through social interactions, relationships and cultural norms.

a purported catalyst for development because such techno-centric development aims to improve the quality of life of people.

Foucault believes that the distribution of power within social networks happens through coordinated social arrangements that are not only agents but also instruments of power, and this includes buildings, tools and documents (Gutting, 2005: 109), which means that power can be distributed through other different physical relationships, and not just by humans. Power is not only a human-centric phenomenon, but it also manifests through structures such as technology, for example the algorithms that enables artificial intelligence. Moreover, Foucault does not see power relationships as being imposed from top to bottom (sovereignty), but rather as emerging from the support that relations find in one another (disciplinarity). Therefore, this dynamic perception of power by Foucault contrasts with the traditional view of power as a static and top-down force, where only rulers possess power.

3.2.3 Types of power

According to Foucault (2004: 28), there should be a discovery of how multiple bodies, forces, energies, matters, desires, and thoughts are constituted as subjects. Foucault believes that power operates firstly at an empirical level which is “the study of forms that power has crystalised into over the course of history” and this is based on observations or experience (Lynch, 2010). This level focuses on how newer modes of power have developed from the older ones (Lynch: 2010).

He identifies disciplinary power and biopower as the modern forms of power, and sovereign power as an older form of power. Examples of these empirical observations and experiences are prison systems, mental asylums, science and sexuality, which he studies in his work. Secondly, the theoretical level is based on ideas or theories (Lynch: 2010). This section will discuss these modes of power.

a. Governmentality

The term *governmentality* was coined by Foucault (Madsen, 2014: 814; Sokhi-Bulley, 2014). It was derived from the French word *gouvernemental*, which means “concerning government” and is centred around debates about power relations (Madsen, 2014: 814; Joyce, 2014: 752). Foucault refers to governmentality as the “conduct of conduct”, meaning that government is the conduct and the activity which shapes, guides and affects the conduct of people (Madsen, 2014: 841; Huff, 2020). Governmentality is how the government controls the actions and thoughts of people.

The term *governmentality* is a combination of the terms *government* and *rationality* (Huff, 2020). Sokhi-Bulley (2014) breaks the word down into the segments *govern* and *mentality* and describes *governmentality* as referring to “both the processes of governing and a mentality of government”. Joseph (2010: 223) says that this concept intersects the practice of governing and the necessary rationality of government, which allows governing. As governmentality involves the state and the individuals, it also affects the interpersonal aspects of an individual. It involves the conduct of oneself, where the sense of self-governance is a guiding force (Huff, 2020).

Power in governmentality is seen positively as a means of productivity. In other words, power is a generative phenomenon because it is not only about dominance but also about the production and generation of knowledge, norms and social practices (Carlsen *et al.,* 2020). Therefore, governmentality is intended for positive governing as there is the willingness of participation from the governed, and the governed are allowed the platform to exercise their own governance (Huff, 2020). Moreover, there is positive governmentality and biopolitics, just as there are negative iterations of these. For example, positive biopolitics can be found in the inoculation of population to ward of disease, while negative biopolitics allows structural inequalities to dictate who has access to good healthcare and who not.

In his work, Foucault describes the emergence of a triangle: sovereignty-discipline-government (Joseph, 2010: 226). This means that “sovereignty is exercised within the borders of a territory, discipline is exercised on the bodies of individuals, and security is exercised over a whole population” and all three must be understood as “concerned with

multiplicities" (Foucault, 2007; Pauschinger, 2023). Each power operates at a different level but, the ultimate goal of all three is to manage the larger group. For example, when Covid-19 hit the world, South Africa enforced lockdown (sovereignty); the Department of Health implemented protocols on how we should behave (discipline); and there were public health campaigns and vaccinations to protect the nation (security). Therefore, this triangle is the assumed 'power to' and its benefits are directed towards the population, the optimisation of health, welfare, happiness, and labour productivity.

b. Sovereign power

From analysing the power exercised in sovereignty, Foucault theorised the concept *sovereign power* (Pauschinger, 2023). Foucault defines sovereign power as the ability of the authority to determine what is right and wrong (legal matters), and pass judgement through punishment to those who violate the rules as a means of maintaining order (Foucault, 2007). For example, in the West, sovereignty has been historically known as the sovereign's right to take the life of its subjects (Foucault, 2003). Sovereign power was used as a means to demonstrate to the subjects through activities like military parades and public killings, that the sovereign has the power to decide who lives and who does not (Foucault, 1977). According to Foucault, this form of power targets the body and views the body as an object of violence or honour (Lynch, 2010). According to Lilja and Vinthagen (2015), the aim of sovereign power is to stop and limit certain behaviour.

As traditional societies transitioned to modern societies in the eighteenth century, the sovereign's right to take life was replaced by the power to administer life (Foucault, 1990). The government preserved and controlled the health and wellbeing of the population (Pierce, 2020) [13]. The transition from killing to preserving life emerged as a new form of

[13] "In his book Discipline and Punish, he shows that sovereign power, which is held or possessed and then wielded repressively by one individual over another or others, became ineffective in the face of increasingly complex social, political and economic relations that developed in the latter part of the sixteenth and early part of the seventeenth centuries. For example, violent public executions (such as that of Damiens the regicide, which Foucault graphically describes in his book's opening pages) were no longer having the

productive power (Taylor, 2014). Even though this was the case, Foucault contends that "sovereign power does not disappear completely with the rise of modernity" (Foucault, 1991; Taylor, 2014). The authority exercised in sovereignty is derived from mutually acknowledged sources such as a constitution because "under sovereign power death was ritualised as the moment of passing from one sovereign authority to the next" (Philpott, 2020; Taylor, 2014). These sources are territorial, because Foucault (2007) states that "sovereignty is exercised within the borders of a territory".

c. Disciplinary power

Disciplinary power focuses on how power is exerted through the means of modern institutions, including prisons, armies and schools (Hodge & Harris, 2016: 115). It employs mechanisms of surveillance over the participants, which shape their system of knowledge through this surveillance (Hodge & Harris, 2016: 115). For example, societies perceive education as a way to acquire knowledge, therefore, a person is always expected to attend school. According to Joyce (2014: 754), the governments have developed impersonal techniques of power and have made them institutionally powerful. For example, the *South African Home Affairs National Identification System* manages and stores biometric data such as fingerprints which are used for verification processes. Through this data, the government has the ability to manage South African population identity (SA Government, 2024).

Foucault (1995: 170) argues that the core of disciplinary power is to train the subjects. The focus of this training is on single individuals rather than the masses; and where power is exercised, it turns these individuals into objects. Dillon (1995: 324) refers to disciplinary power as a positive account of power, as it entails both pervasive enabling and disabling processes. Furthermore, this training allows for many characteristics of discipline, including hierarchical surveillance, normalising judgment and examination.

Through disciplinary power, the body is treated as a machine that can be optimised for economic purposes, and this is achieved through controlling individuals by hierarchical

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desired effect of displaying the king's power and thereby discouraging criminal acts and ensuring social and political order." (Taylor, 2014).

surveillance, normalising judgment and examination (Foucault, 1995: 170; Raine, 2023). Through hierarchical surveillance, individuals feel constantly watched and that makes them self-regulate their behaviour. For example, in schools, learners feel that they are being watched by the teachers even in the absence of the teachers. Some individuals do not follow these norms and see them as abnormal because the set norms do not align with their perspectives, experience and values, and doing this results in judgement and all individuals are supposed to know about this judgement: this is seen as normalising judgement. For example, there are set norms in a classroom – such as raising a hand before you speak – and learners are categorised based on how they adhere to these norms. Lastly, examination is the process of inspecting and classifying individuals based on established knowledge (Foucault, 1995: 177; Raine, 2023). For example, learners are examined through assessments and classified according to grades. Therefore, disciplinary power entails how people's behaviour in a territory is regulated with a shifted focus (Joseph, 2010: 226), which is a transition from sovereignty and is affected by modern developments.

As a specific mechanism of disciplinary power in modern society, surveillance is a decisive economic operator (Foucault, 1977: 175), and this surveillance happens through panopticism. *Panopticism* is a concept described by Foucault from a historic ideal prison known as the *panopticon*, developed by Jeremy Bentham in the 18th century (Mungwini, 2012: 344; Foucault, 1977: 197). Foucault uses this image metaphorically to refer to the operation of power and surveillance that works on the body and the soul of the inmate in the modern prison, and in contemporary society (O'Farrell, 2021). The main effect of the panopticon, according to Foucault (1977: 201), is to "induce in the inmate a state of conscious and permanent visibility that assures the automatic functioning of power" and that the inmates are part of a power dynamic in which they themselves hold some power. It is also worth noting that surveillance in disciplinary power was and is enabled by modern technologies – whether through architectural construction or CCTV (Dillon, 1995: 324). As the focus is on an individual, technology makes surveillance easier because of the personalised space in which it operates that then makes individuals feel safe but also opens them up to constant observation.

Hierarchical surveillance, normalising judgment, examination and panopticism produce what Foucault calls *docile bodies*. According to Foucault, docile bodies are individuals who have accepted and submitted to control by being efficient and compliant within the systems of disciplinary power (Foucault, 1977). Unlike in pre-modern societies, where soldiers were defined by their strength and bravery, modern societies are defined by willingness to be moulded into docility. This docility is exercised over the body through three techniques: scale of control, object of control and modality (Foucault, 1977). *Scale of control* means the in-detail control over the body rather than treating it as a whole, for example, gesture and movement. *Object of control* focuses on the network of forces that controls behaviour, for example surveillance systems like car tracker. Lastly, *modality* refers to the continuous monitoring of each activity, rather than only focusing on the end result of the activity (Foucault, 1977).

d. Biopolitics and biopower

With disciplinary power, those in power have information about the individuals which they mould and manipulate in the background and construct what is to be regarded as "knowledge" because power and knowledge operate as one force. Now that the government has information about individuals and is assured with self-regulation, the shift moves from single individuals to the masses. Disciplinary power now transforms to biopolitics. Sokhi-Bulley (2014:) defines biopolitics as "a set of procedures, or relations, that manipulate the biological features (for example, birth rate, fertility) of the human species into a political strategy for governing an entire population". In other words, biopolitics is about the strategies a government implements to control the biological behaviour of population, for example the use of contraception. The aim of contraception is to control a country's fertility, mainly to reduce the population. The objective of this is to achieve, security and order, economic stability, public health, environmental protection, social welfare and political stability. The government sees these measures as a means to achieve *eudaimonia*, therefore biopolitics is implemented in a way that individuals are made to see themselves as having power over their bodies, whereas the power starts at the government level.

Biopolitics is an expression of governmentality because the separation of governmentality from sovereignty resulted in the population being the core of ruling (Joyce, 2014: 753). According to Buchanan (2022: 1), the transition from disciplinary power to biopolitics represents new aspects of power by adding a new layer of operations of power that requires a different analysis made possible by statistics and specifically, what statistics reveal about the government of populations rather than individual bodies. The author states that it brings new functions and new types of knowledge. This created a platform for a governable economy and society that were autonomous in liberalism. The biological features, which are seen as social problems that Sokhi-Bulley refers to in the definition of biopolitics, enable people in power to exercise it. For example, Foucault (1994: 73) describes liberalism as one agent of biopolitics which refers to as method of rationalising the exercise of government. Foucault (1994: 73) asserts that because these features cannot be separated from political rationality, liberalism took charge.

3.3 Relevance for ongoing argument

Foucault's concept of power plays a crucial role in postmodern[14] societies, for example, it is used to understand how social power, inequality and dominance are practiced and reproduced in societies (Yates, 2014). For example, he uses the concept of disciplinary power to elaborate how humanity is controlled in modern societies through mechanism of control typified in structures such as schools. His work is also used to investigate contemporary world issues such as the spread of neoliberalism[15] because neoliberalism allows for market-driven innovation and technology through privatisation, deregulation and globalisation, which poses challenges to the global technological landscape. In terms of such consequences, continents such as Africa tend to suffer more due to the aftermath of colonisation. The impact of neoliberalism cannot be separated from power relations. In human existence knowing what constitutes knowledge is important, as Foucault states that we cannot separate power from it. Therefore, these forms of power reveal control and freedom within societies striving to develop their technological landscape, like the

[14] Gary (2015) defines postmodern as "a repetition of the modern as the "new"".
[15] Neoliberalism is a political and economic idea that emphasises free trade, deregulation and globalisation, and a reduction of government spending (Manning, 2024).

SADC region, because power is everywhere and is a network of relationships with societies. As technology is important in our lives, it is equally important to realise the power relations it comes with and how they both shape our metaphysics and epistemologies.

3.4 Conclusion

Foucault's genealogical method highlights how history plays a vital role in making modern societies what they are. Knowledge and power have been present and significant in historical societies and have transitioned into (post)modern societies. Therefore, the nexus of power-knowledge lays the foundation of how societies are structured and how they operate – it describes how power flows as a generative force throughout social structures. This includes the idea that power is everywhere and is not only a top-bottom approach. This is visible in the types of power, such as disciplinary power, which includes, for example, how the behaviour of learners is moulded by the control exercised over them by the norms of policies of the school and the authority of the teachers. Humanity has normalised how the power that is everywhere plays out in modern societies, for example, when government controls individuals by manipulating biological features, the individuals become docile. Technology is fundamentally incorporated within these (post)modern societies; therefore, the next chapter will discuss the interconnectedness of power relations in the modern SADC region.

Chapter Four: Technology and power in the SADC Region

4.1 Introduction

In chapters two and three, both the history of technology in Africa and Foucault's concept of power were discussed respectively. Contemporary African technological development has been, and is still being, affected by the aftermath of colonisation because the contributions of African scientific knowledge was disregarded and overlooked. This historical context has shaped the African landscape to be a combination of hope and challenges in terms of technology, which necessitates careful reflection and repositioning to utilise technology as a force for social upliftment and development in the region. Philosophy of Technology and African Philosophy are posited to provide important insights to support this task.

Foucault's methodologies elucidate a concept of power that is suggestive in terms of outlining how power relations have shaped societies in the contemporary era. Foucault suggests a diversified concept of power that is still prevalent in our societies (disciplinary power) which shapes the subjects of this power. In an era where global development goes hand in hand with technology it is important, I argue, to investigate the philosophical underpinnings that arise at the intersection of technology, power, societal development and policies. This chapter relates the Foucauldian concept of power to technology in the specific context of the SADC region, since it is posited that the incorporation of technology to this region would have specific discernible impact which is unique in contrast to the Global North.

4.2 African technological adoption and resistance

Pascah Mungwini (2012: 340) suggests that "in philosophical terms, the African encounter with Western modernity defines the context within which what unfolds in post-colonial Africa can be understood, including even its ethical and social problems". In other words, the infiltration of the West in Africa, most prominently through colonisation (which was in turn also impacted by the Industrial Revolution and its mechanistic logics), has

produced the Africa of today. Colonisation affected all spheres of African life, for instance, it overlooked the contributions of African traditional technologies and led African to adopt technologies that arose in the West (which is what we currently use in Africa). Post-colonial Africa's ethical and social challenges encapsulate also the technological ones, such as the digital divide. Colonisation overrode, transferred and diffused African traditional technology through means of colonial power and imperialism to form a new path for development. Thus, Hegel (2001: 117) described historical Africa as a continent with "no movement or development to exhibit" and belonging to "the Unhistorical, Undeveloped Spirit still involved in the conditions of mere nature".

Clapperton Mavhunga provides an avenue to change these misconceptions and to write a new story about African technology. In his book, *What do science, technology, and innovation mean from Africa?*, Mavhunga (2017: 1) explored what technology means from an African perspective, a meaning that is free from external and colonial influence. He emphasises that such an exercise is crucial because adopting rigid Western definitions poses a significant threat to Africa's self-determined future (Mavhunga, 2017: 1). Politically, a prominent effort toward building Africa's self-determined future and mitigating the threat posed by incorporating technology wholesale from the West is circumscribed in *Agenda 63: The Africa we want*, which presents a "blueprint and master plan for transforming Africa into the global powerhouse of the future" by "manifestation of the pan-African drive for unity, self-determination, freedom, progress and collective prosperity" (AU Commission, 2024). Agenda 63 aims to transform Africa and to shape its coming future.

Agenda 63 aligns itself with Afrofuturism, which is "a cultural aesthetic that combines science-fiction, history and fantasy to explore the African American experience and aims to connect those from the black diaspora with their forgotten African ancestry" (Gallagher, 2006). It strives to present a utopian imaginary for Africa's technological future, one that is aspirational and directional. Afrofuturism envisions an African future where African culture and technology intertwine to create a unique and new narrative for the region that is rooted in the past and looks to the future (Daisie, 2023). In building this new African world, technology is seen as "a tool for empowerment and progress, a means to reimagine the future" (Daisie, 2023). Mavhunga's book and Afrofuturism as a general

movement are closely aligned with Foucault's genealogical method in spirit, because the aim is to trace and contextualise knowledge within a historical lineage, this time, in terms of the history of technology in Africa, reinterpret said technological development, and describe how Africans can develop new technological ideas rather than rely on colonial ones. For Mavhunga and Afrofuturism, this entails the sketching of a 'history of the margins', very much like Foucault does, by imagining a future technological history that is rooted in the African situation. Tracing, reinterpreting and deriving new ideas about technology encompasses (new) knowledge, which is why such Afrofuturist imaginaries remain important – Foucault describes how knowledge and power cannot be separated because power decides what is knowable and by whom (Foucault, 1975). This suggests that, in order to facilitate thinking on a new relation between SADC and technology which includes debates about technology adoption, resistance and the future in Africa, philosophical reflection on knowledge and power must be included.

4.3 Rethinking technology, policies and power in the SADC region

Beyond sketching imaginaries of the future, there is a strong need for political mobilisation in this regard. Informed by social needs, region-specific problems, and the use and reliance on technology as a solution (techno-solutionism)[16], it is important for policies to act as moral agents and as guiding tools on how things should be done in order to achieve the desired goal for Africa, a form of utopianism.[17] In this regard we must centre the role of philosophy, since it offers "philosophical reflection on how best to arrange our collective life – our political institutions and our social practices" (Miller, 1998).

According to Boonin (2018) "philosophical reasoning can fruitfully be brought to bear on matters of public policy". I argue that the philosophical principles of critical thinking, and the centring of collectivism and communitarianism, may fruitfully inform policies. The goal of such philosophical reflection is to ensure the wellbeing – *eudaimonia* – which can be achieved by overcoming social problems to benefit the African people. Also, such

[16] Techno-solutionism is a belief that all human problem can be solved through technology (AIU, 2024).
[17] "Utopianism is the general label for a number of different ways of dreaming or thinking about, describing or attempting to create a better society" (Sargent, 1998).

philosophies allow for integration of Foucault's view of power, for example, through collectivism societies can formulate power-knowledge. Such an approach is noticeable in Southern African policies, as discussed in Chapter two, and various Southern African countries saw policy as important for the establishment of the SADC region.

The insights of Foucault are crucial here. Foucault states that in modern societies, there is a close intertwining between power and discursive knowledge (power-knowledge). Therefore, when we construct knowledge(s) through Afrofuturistic imaginaries in relation to aspects such as utopianism, *eudaimonia*, techno-solutionism and establishment of policies in the shadow of technological development this is also closely tied to how power is exercised. In Africa, this exercise of power-knowledge may problematically embed colonial history therein, because the colonisers disrupted traditional African technology and development. In African pre-modern societies, technological innovations such as baskets were meant for communal use, which symbolises an African approach to technology through the African principle of Ubuntu (Shizha, 2016). Power-knowledge functions in this way in Africa's history: The colonisers changed the traditional African narrative as regards technology by employing sovereign power in African societies, which instantiated and enforced European knowledge in terms of defining technology, policy and *eudaimonia* for the African people. This resulted in epistemic injustice (Fricker, 2007).

Colonial powers reorganised traditional societies and political structures to disperse principles such as Ubuntu. Resultantly, Africa experienced factionalism (Lemarchand, 1987). Such impacts of colonialism show how power may be exercised through social structures to produce divisions. Thus, even though the colonisers enforced sovereign power over Africa, the disregard of African scientific and technological knowledge was an imperative. Africa had to remain savage and "mysterious"; thus, as Wiredu (1976) argues, colonial powers were blinded by their own ideas concerning scientific and technical knowledge.

Through colonisation Africa was classified as a means of production of primary goods and agriculture for the world economy, and this became the foundational structure for African governments. In many ways this continues to describe the post-colonial context, since extractivism persists in many African countries – for example, South Africa is known

for mining natural resources and exporting them. Therefore, development in Africa was and continues to be defined by the West, because of the economic benefits they derive from Africa. The West has categorised world regions according to their state of 'development'.

I argue that the mechanism at play is what Foucault calls *disciplinary power*, and this is exercised at global level. African countries remain under hierarchical surveillance in terms of global flows of capital, and many Western powers have normalised judgement and examination through economic criteria. Even though African countries have supposedly gained "independence", such power relations are still at play and shape social relations in the region.

The technological landscape in Africa may be said to be caught in a Catch-22, because while there is technological innovation, thinkers like Kinyanjui (1993) argue that African governments maintain systems that promote control rather than development. This is why Quijano (2008) argues that there persists coloniality in post-colonial Africa. To counter the persistence of colonial power structures in terms of technological development, Kinyajui (1993) argues that governments and post-colonial leaders[18] must take responsibility for the current African crisis, which includes technological challenges, corruption, disconnected leadership and overemphasis of economic growth not leading to meaningful structural reforms.

In this regard I argue that taking responsibility and making a change is only possible by philosophically repositioning the notion of "development" and technological policies in Africa, which then leads to more responsible implementation. This may be achieved through the revitalisation of African epistemologies[19] and the critical reflection of the structures of power-knowledge. Such an approach may responsibly lead to establishing

[18] Post-colonial leaders include intellectual agents which include philosophers. Therefore, philosophers must be included in development and policy discourses.

[19] Such as Ubuntu, because this can serve as a solution to negative impacts of technology (Uleanya, 2022). Redefining technology using the typologies of technology is also important, it allows for decolonisation of power-knowledge in the technological landscape. This is an excellent point – elaborate on what these typologies entail and how they relate to the topic at hand

institutions capable of balancing political interest and technological development, with the SADC being an example of these institutions.[20] For change to be enacted, however, the intention must extend beyond merely establishing these institutions: there must be newer ways of thinking about technology and for conceptualizing the integration of African technology, African philosophy, and Philosophy of Technology. This will result in a productive union of Western technological paradigms and African epistemologies.

The Setswana moral maxim *feta kgomo o tshware motho* is relevant here. Its direct translation means “pass the cow and catch a human being” (Ramose, 2010). In African societies a cow symbolises wealth, and the maxim serves to highlight the importance of humans over wealth and profits (which are embedded in economics and development) (Molefe, 2019). This maxim provides a foundational direction for redefining African development, since it critically engages with development as an economic principle which sketches business and profits as central. The broader community is often disregarded, which cannot be taken wholesale into the African perspective. According to Molefe (2019: 104), “Ubuntu, construed within the theoretical prism of development ethics, imagines a robust society as one that creates and provides material, social and political resources for individuals to be able to pursue moral perfection.” Molefe thus suggests that African thoughts and principles can be embedded in development processes for the betterment of African societies through the proper utilisation of resources (i.e. inclusive of the technological), for example, innovation that is not market- driven and promote capitalism and inequalities

4.4 African philosophy, theories and African technology

According to Uzomah *et al.* (2023: 13), contemporary African philosophy should prioritise the development of pragmatic ideologies that can effectively contribute to Africa’s sustainable development with an emphasis on advancing technology. This aligns African thought with the social impact of technology. One example is how technology may be

[20] This will minimise the ongoing exploitation of Africans through economic and development pretense and safeguard African technological innovation potential.

used to solve social problems such as unemployment. This necessitates reflection on how technology is developed and deployed to facilitate the combating of problematic social issues (Van Rensburg *et al.*, 2019: 11). Furthermore, African philosophy must produce practical and innovative ideas that enhance Africa's technological development, while also examining its intersection with African culture and ideologies to meet the needs of contemporary African society. For example, innovative agricultural technologies are vital not just as a means of food production, but also because agriculture is an integral part of African culture and societies (for instance, in terms of ceremonial purposes, festival for celebrating cycles of planting and harvesting).

I also agree, in line with Uzomah, that the focus should be on generating cutting-edge concepts that stimulate the creation of indigenous African technologies and their epistemological reach (Uzomah *et al.*, 2023: 33). After the liberatory efforts of African countries, which has seen the gaining of political independence, there exists evidence to show that there is political capability and potential to change the continent. Aloo (2023), for example, describes remarkable inventions that originate in Africa. These include Firefly, which is a low-cost machine that converts plastic waste into long-lasting bricks and was invented in Kenya. Such endeavours outline a path towards African technological emancipation and freedom. Technological innovations that originate in Africa, like the Gautrain, suggest that regional collaboration of African countries in indigenous knowledge production should be embraced. The restoration of an indigenous knowledge systems curriculum in this regard is crucial, since such integration with technological development must speak to the region of application.

Theories developed by African people can thus be used as nexus between African philosophy and African technological developments. As I have mentioned, such theories may include Ubuntu which concerns the values and practices of African black people that make them and their communities authentic while positioning the individual as part of a larger communal, societal, environmental and spiritual world (ASWDNet, 2024). Therefore, responsible technological development and innovation needs to relate to the intent, values and practices such as typified in Ubuntu principles. This is supported by the African Renaissance theory, which centralises the process of making African worldviews, economies, society and technology societal pillars (ASWDNet, 2024).

Another useful approach is epistemic decolonisation theory, which focuses on reclaiming knowledge by returning to local languages and philosophies while shifting the source of Western knowledge (Ndlovu-Gatsheni, 2018a; Ndlovu-Gatsheni, 2018b; Ndlovu-Gatsheni, 2020). African knowledge is promoted by the shift away from colonial thought in Afrocentrism, and post-colonial theory. Post-colonial theory critically examines the social, political, economic and cultural impacts of colonialism (Mitchell, 2024; Elam, 2019). This theory is important for technologically emancipating Africa because it "addresses the oppression of all communities historically treated as racially and ethnically inferior to Europeans, whether or not these communities self-identify as 'indigenous' or think of themselves as formerly colonized" (Darian-Smith, 2015). Decolonisation is central in this project, since the aim is to address the lingering impacts of colonisation. In each of these approaches, the question of power – who exercises power, and what forms of knowledge are important – is central.

4.5 The relevance of Foucauldian perspectives in the African context

As stated in the previous section, rethinking technology in terms of development and policies in Africa and in the SADC region is a complex and challenging task that requires grassroots strategies that are intended for change. Foucauldian perspectives provide an important lens since his insights, though derived from a Western context, remain foundational and useful to describe how Western societies – as structures imposed by colonialism in Africa – are constructed, structured and maintained through specific power relations. Foucault's methodologies, genealogy and archaeology, are critical points of analysis that may enable the enactment of change in our societies.[21] For instance, while African traditional societies did not have modern surveillance technology, through an African metaphysics, "its beliefs, and mythological paraphernalia", leaders were able to apply panoptic power over the citizens and control their behaviour and social relations (Mungwini, 2012). Such intersections between African practice and Western thought must be productively explored.

[21] While archaeology focuses on ideas that shape our reality, genealogy traces the history of these ideas.

History plays a vital role in building the future and, therefore, rethinking the ideas of development and technology in Africa needs to be traced back to the traditional African connotation of these ideas. This will result in technology policies being informed by African culture. Historical awareness allows contextual understanding, the tracing of the evolution of ideas, the development of critical reflection, and new methodological insights. According to Foucault, genealogy allows us to not just accept new ideas uncritically.

For example, applying the genealogy method in the African context will allow Africans to question technologies such as artificial intelligence (AI) in their context – consider the impact of AI on African concepts of personhood and Ubuntu – rather than merely applying a Westernised perspective to such a problem. At the 56th session of the Economic Commission for Africa Conference of African Ministers, experts agreed that AI presents substantial development opportunities for Africa through its potential to boost economies (UNECA, 2024). Moreover, African ICT and communications ministers collectively endorsed the Continental Artificial Intelligence Strategy and African Digital Compact, intended to accelerate the continent's digital transformation by unlocking the potential of new digital technologies (AUC, 2024). Foucauldian perspectives on power relations are important in this regard because African countries need to ensure that these strategies do no perpetuate coloniality, and merely replicate extractive capitalism. Independence of thought is needed to safeguard African innovative thinking and to ensure a truthful collaboration with Western countries (true to Africa's heritage and cultural groups). For example, among the most prominent African technological innovations is Mobisante, an ultrasound application that can be connected to a cell phone and that was invented in South Africa (Aloo, 2023). This innovation may be under threat, however, when exposed to global market pressures. Western countries may exploit such innovations through funding them, exercising their power in this way. There may even be suppression, though Mobisante is a particularly important innovation for the local context.

The positive account of Foucault's concept of power, power as a productive force, is essential to incorporate into African thinking in terms of technology since an awareness of the impact of power through societal structures may transform African societies to better the lives of all its citizens (by challenging Western hegemony). An example of this is African digital rights organisations that advocate for affordable and quality internet

connectivity, privacy and freedom of opinion (Adeboye *et al.,* 2019). Through a recognition of power as a productive force, governments may develop policies that shape and guide the conduct of its citizens. According to Foucault, this is how governmentality functions. SADC, as a means for technological and economic development, directs development and technological policies. Policies, which may have problematic Western notions of disciplinary power embedded therein, may promote forms of calculative rationality that are alien to the African context. One example is how, in South Africa, disciplinary power is exercised through the *South African Home Affairs National Identification System*. Keep in mind that governmentality, as described by Foucault, is the combination of the government and rationality. The disciplinary power embedded in such policies will train subjects, and while avoiding problematic historical legacies of the West I argue that African governments may also use this approach productively to support development through its discourses on technology.

4.6 Conclusion

It is crucial to reflect philosophically on technology's impact on society and history since it encompasses also power relations. Technology is what it is, and does what it does, since knowledge-power determines what is knowable (and thinkable). Humans are the subjects of this knowledge. Therefore, Foucauldian perspectives can positively contribute to a critical understanding of the technological landscape in Africa. Foucault's genealogical method allows humanity, especially in the African continent, a platform to trace the history of power in the region to develop new ideas for the future. Africa has suffered colonisation, along with the power relations entailed thereby, and needs new ideas as regards technology to avoid the disruption by colonisation in terms of technology – its recognition and definition in Africa.

Chapter Five: Conclusion and future directions

5.1 SADC, Technology and power contextualisation

Technology will continue to be part of human life and provides a space to usher in transformative advancements or regressions in the world, and Africa specifically. The opportunities that technology provides as transformative tool is acknowledged and embraced through policies such as those in the SADC region – it is seen as a catalyst for development and social change. One of the objectives of the SADC is to promote the mastery of technology between member states.

Due to its pharmakon nature, however, technology sparks critical philosophical debate. Such questions include the impact of technology on society, human behaviour, and the environment. The foundation of the answers to these questions are philosophical because these questions are metaphysical, epistemological, ethical and logical in nature. For instance, the metaphysical answer to the question of whether humans need technology is that humans are *Homo Faber* – we have been a technical species since pre-history.

Furthermore, the creation, use and perception of technology in our societies are epistemological because they shape what knowledge is in our society. Therefore, the implementation of policies in our societies shapes what knowledge is, which has specific implications for power-knowledge. I have argued that, in post-colonial Africa, it is important to understand the nexus between power relations and technological transformations. This study provides a basis for asking philosophical questions about technological transformation and power relations in the SADC region, questions which are still under debate by the few scholars who approach technology from an African perspective.

This study hypothesised that Foucauldian perspectives on power may reveal power dynamics that significantly influence and shape the contemporary technological landscape in the SADC region. De Lissovay & Bailon (2019) and Mbembe (2008) suggest that the African continent continues to experience coloniality, which is the pattern of power that emerges from the invisible part of history and encompasses political, cultural,

epistemological and symbolic conditions; this problematises how post-colonialism may transform our societies, since we need to craft new and productive pathways forward. For this reason, the aim of the study was to highlight the relationship between technological advancements and power relations in Africa, specifically the SADC region, by investigating contemporary technological developments in the SADC region and in an exploratory manner applying Foucault's theory of power to the concept of technology and development.

5.2 Technology in contemporary Africa

One of the objectives of the study was to investigate the contemporary technological developments in Africa, specifically the SADC region, against the backdrop of colonisation in the continent and the resultant power dynamics which continue to shape how technology is deployed. Foucault argues that tracing where ideas come from is important in critically reflecting on contemporary societies. Therefore, tracing African pre-colonial technological developments is foundational in understanding contemporary post-colonial technological developments. Studying contemporary technological developments is important as it outlines the ethical, social and existential implications thereof.

Africa has seen technological innovation since the dawn of humanity, such as the *Oldowan* that was used for cutting and trimming. Furthermore, these innovations were not static. Rather, such technological innovations were location-specific and contextually responsive, invented based on different needs the societies had, and were often meant for communal use and the management of the natural resources (such as agriculture). The design knowledge of these technological innovations was preserved through oral accounts and passed on from generation to generation – but this form of technological development was disrupted by colonisation.

The disruption was carried out by the European colonisers who applied colonial power to disregard African technological knowledge and innovation, as well as African culture and identity. They used technology as a tool to enforce dominance and control over African

societies. Such an approach necessitated that colonisers would regard African innovations as non-scientific, which resulted in Africans shying away from their innovations to instead adopt and rely on colonial technologies. The colonisers had extractivism as a goal – they extracted African resources for their benefit.

The process of colonisation has thus shaped the post-colonial African technological landscape, making it a duality of challenges and opportunities. Africa has made progress in developing different technologies, such as the LifeBank in Nigeria, but still faces challenges such as the digital divide in a globally networked world and persistent extractivism through capitalism. Consequently, African governments have put policies in place to embrace technological opportunities and eradicate technological challenges, such as the establishment of the SADC. In spite of this, the colonial aftermath is still apparent in Africa and across the globe, as the global North controls what is considered as development and technology and categorises world regions according to their development progress.[22] Problematic power relations persist.

This African technological landscape, as characterised by colonial power relations, necessitates governments, citizens and scholars to reflect on the epistemic injustices that Africans have experienced and still are experiencing. The process of doing so requires Africans to find and develop newer ways of thinking about technology and development. Wiredu points out that this thinking needs to perceive development beyond tools.

Furthermore, these new forms of thinking need to be focused on development, particularly technologies and policies that drive human development, which can be achieved through an integration of African principles such as Ubuntu in terms of technological thinking. As I have argued, there needs to be an integration between African philosophy, African technology and Philosophy of Technology. Literature and critical engagement still lag in this regard. However, such integration is foundational in decolonising African perceptions of technology and building the future of a technological Africa. It allows for the recognition of power relations that are at play in the technological development of the continent. Such newer ways of thinking, through the integration of African philosophy with African

[22] World System Theory

technology, requires decolonisation to be embedded in the knowledge, design, uses and policies of technology.

5.3 Technology and Foucauldian perspectives in the SADC region

Human development and *eudaimonia* are core to human existence and survival; they are of metaphysical importance. Furthermore, human development and *eudaimonia* as concepts also intuit specific processes that are developed to achieve these goals, which is why governments across the globe have policies in this regard that are often centred around technology. Such policies embed power, because power is "the capacity to bring about outcomes" (Lukes, 2007). Said outcomes may be achieved in many different ways, including recourse to authority, influence, force, coercion, violence, manipulation and strength (Lukes, 2007). As a result, different policies conceptualise or disregard power relations differently, and political philosophy may serve to inform the nature of the capability, and the outcomes embedded in these understandings of power (Green, 1998).

The insights of critical theorists, such as Foucault, are crucial here since they look at how power shapes and functions in our societies. Foucault reflects on how power is used in our societies as a tool for social control and how power is commonly perceived as negative. He instead sketches power as productive in terms of subjectivities through his archaeological and genealogical methods. Foucault's holistic perception of power describes how power operates positively in our societies through mechanisms such as disciplinary power. He contends that power is a central part of our being in society and argues that the knowledge we possess is a product of power (the aim of power is to produce outcomes). Thus, power plays a role in terms of technological knowledge, design, uses and policies that shape our society.

Therefore, rethinking technology in Africa without the conceptual integration of power relations in the activity will be a fruitless exercise, since power determines what may be called knowledge in our modern societies. His observations in Tunisia influenced his extensive work on power, and thus he is cognisant of the African context. I argue that he may be an ally in productively contributing to building a new technological Africa. For

instance, the development and use of technology in the SADC needs an awareness of disciplinary power. Furthermore, the development policies of the SADC function as an act of governmentality, which shapes how we live within our borders.

5.4 Limitations of the study

The disruptive impact of colonisation on technology extends to scholarship. By overlooking African technical knowledge, skills and innovation, colonisation has long influenced and shaped debates concerning technology in Africa. This resulted in epistemic injustice, as the oral accounts of African technological knowledge were disregarded. Therefore, there is a lack of literature about the traditional technologies (also from an African philosophical perspective). As a result, African studies are often reliant on Eurocentric perspectives. Bell (2002) defines the encounter of the African world with European modernity as being in itself a philosophical text to be read, critically appraised and understood. The lack of literature and an extent of traditional technical knowledge poses a challenge in achieving what Bell calls for, and such knowledge still develops in the shadow of coloniality. We need new ways of moving forward.

Ndasauka (2024) and Mavhunga (2017) are reflective of the ongoing debates about technology in Africa in the post-colonial era. Such debates mostly deliberate on the impact of technology on humans, societies and the environment from a philosophical viewpoint, but the discussion is mostly centred around the ethical implications of technology. I suggest that academic fields such as Philosophy of Technology have been overlooked, especially from the African perspective, and this leads to limitation in terms of literature. According to Bouabdeli (2024, 16), overlooking Philosophy of Technology as a useful field of study “is hindering its potential to be an instrumental contributor to the *practical* enhancement of technological development and implementation”. A lack of existing literature may thus limit the conclusions of this study.

5.5 Novel implications

Our contemporary societies are increasingly defined by technology, and this trajectory is expected to continue in the future. For instance, Africa's *Agenda 63* describes the need to build an African continent that is developed and technologically advanced. Achieving this goal means that regional integration approaches, such as the SADC, must be sustained through the responsible and reflective strengthening and implementation of policies. Moreover, building an Africa we want requires an Afrofuturistic mindset, in which academia plays a crucial role. However, there is a lack of African Philosophy of Technology in academia. This field has the potential to bring forth new debates and posit new directions for Africa in terms of technology, development and policies. However, I have argued that an African Philosophy of Technology requires an analysis of power and the reflection of post-colonial context – which I have done by applying Foucault's thought.

The integration of power relations, specifically those proposed by Foucault, allows for a more holistic approach to technology, which is crucial in the African context due to its diverse character and cultures. Foucauldian methodologies allow us to critically incorporate history in the development of new ideas while avoiding the problems inherent in colonial legacies – new perspectives in terms of metaphysics, epistemology and ethics. This study, therefore, argues for and serves as a foundation to develop African Philosophy of Technology in academia, which will have policy implications and assist African governments in achieving the Africa of the future.

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