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Chapter 11

AI-ready? How African governments are assembling policy in anticipation of data- and AI-driven techno-futures

Angella Ndaka

Abstract

With the current growth of artificial intelligence (AI)-driven applications in Africa, and the increasing media attention devoted to data-driven decision-making in virtually all key spaces in government as well as in society, policymakers are becoming increasingly aware that AI-driven ecosystems are inevitable. In this chapter I draw from feminist science and technology studies (STS) approaches to discuss how different governments are anticipating AI technologies, paying particular attention to the ways this anticipation relates to the framing and reframing of public policies. Of interest is the way in which policy strategies capture or mute the role of the institutions and the people who will shape AI investment, design and use, as well as overall governance. By examining the three publicly available AI policy strategies, the chapter examines how different governments on the continent are anticipating and framing AI techno-futures. The chapter responds to the question: What do the publicly available AI policy strategies reveal about how African governments are framing and anticipating AI techno-futures? It tries to compare how different policies are framed, as well as to reveal how governments see AI and big data compared to how the market sees them. The policies analysed reveal that African governments foreground technological advancement, economic growth and research, and are less focused on people and institutions whose role is important in determining how the value in the technology may be shared equitably. The chapter argues that African governments and critical AI scholars must invest in policy methodologies that counteract the tendency of large and emerging tech actors to presume an inevitable journey of converting data to monetisable knowledge and other useful products. The chapter proposes that governments and AI-critical scholars should start seeing like a market by focusing on the apparent assemblage of power, knowledge and profits, and advancing policy frameworks that require a comprehensive account of how value is extracted from data collection processes, and how this 'value' translates to the flourishing or disenfranchising of the populations from which data is extracted. The chapter reveals some gaps in and challenges to deliberative policy assemblage and engagement in relation to AI

techno-futures in Africa. It proposes some of the ways different actors could contribute meaningfully to AI policies through deliberative policy processes.

Introduction

Government policy spaces are political spaces shaped by different competing interests, and more often than not exhibit the gap between the prescribed and the practised (Aminuzzaman, 2013; Jackson, 2021). They are places where the language is mainly political, and power asymmetries, political entrepreneurship and political consensus form their character (Jackson, 2021). This is the environment that shapes how policymakers perceive their world, and how narratives about everything including technology are framed (Ndaka, 2023). While local and national technological goals are important, global discourses and goals of economic and technological growth have a lot of influence on which policy agendas governments prioritise (Miller, 2021). And because political and economic interests are normally at the centre of all policy negotiations, the policies that emerge are a product of contesting policy agendas (Kingdon, 1995), with the 'facts' that emerge through these contests and negotiations being presented as policy proposals (Hill, 2014), despite being the result of claims and counterclaims of different interests, power and politics. But who dominantly shapes these 'facts'? Whose agendas dominate the technological futures? Who gets to benefit from these mythical shared political and technological futures?

Many public and private institutions are currently trapped in a shared belief that science and technology hold the solutions to all social problems, with the ability to deliver shared benefits (Miller, 2020). They therefore assemble and anticipate their technology policies and strategies in the hope of achieving these ends. However, most of the strategies are imbued with ideologies such as techno-nationalism, techno-optimism and techno-fixes – which predominantly inspire how the purported shared visions of the future are mirrored in national goals and policies, as well as how technology investments are justified (Jasanoff & Kim, 2015; Miller, 2021). However, the critical question of embedded power relations, knowledge representation and distributive equity remains muted in the current AI policy debates. The non-dominant and 'unpopular' imaginaries are silenced, slowed and/or eradicated daily in favour of the dominant imaginaries (Miller, 2020), mainly shaped by a few powerful actors. This shows how sociotechnical decisions are shaped, with the politics of 'mattering' predominantly determining who shapes which technological goals and perspectives (Burch & Legun, 2021). These exclusion/inclusion dynamics provide a conducive environment for a

few dominant actors to decide how the larger society envisions shared technological futures, and how they are further stabilised in real life, as various studies (e.g. Jasanoff & Kim, 2015; White, 2015) have pointed out.

Studies show that techno-politics can enhance or disenfranchise, and potentially shut down alternative pathways of societal sustainability (Leach et al., 2010; Moore, 2007; Ndaka et al., 2024). This especially depends on how individual governments are anticipating technology, how the different sociotechnical imaginaries and pathways are normalised and naturalised in both the histories and the futures of that society, and how these pathways materialise in national and global policy instruments (Harvard STS Program, 2010; Jasanoff et al., 2004). Therefore, the potential of policies that support a mythical inevitability and 'rightness' of AI and emerging technology, including its framing, inevitably provides a pathway for profit-making entities to thrive at the expense of other sectors of society (Crawford, 2021; Hasselbalch, 2021).

In Africa, the current AI-driven applications and economies are increasingly receiving attention from virtually all key government sectors and societal spaces. While there's no doubt AI may exert positive effects for African populations, the question is, whose AI and whose benefits is the current AI sociotechnical infrastructure propagating? Sustainable AI techno-futures may only be feasible if AI and emerging technology research, its governance and related policy debates are premised on African societal needs (Ndaka & Majiwa, 2024), shaped by contextual and cultural values (Robinson, 2020; Ruttkamp-Bloem, 2023). This will ensure that technology applied in Africa does not treat Africans as passive objects and recipients of technological tools (Hoffman, 1990), reducing them to implementers of global discourses and regimes of truth, as observed by Graham (2015). African perspectives and knowledges appear to be muted in the global debates and ethical principles that are shaping AI agendas (Eke & Wakunuma, 2023), and seem to be merely a continuation of the knowledge hegemony propagated in the previous four industrial revolutions (Okyere-Manu, 2021).

In this chapter, therefore, I draw from feminist STS approaches to discuss how different governments are anticipating AI technologies, paying particular attention to the ways this anticipation relates to the framing and reframing of public policies. Of interest is the way the policy strategies capture and/or mute the role of some institutions and the people, including

which institutions dominate and which ones are subjugated. This kind of analysis is important for understanding which entities predominantly shape how AI investment, design, use and overall governance emerge, and whose interests are enrolled in instruments that define shared techno-futures in Africa. By examining the publicly available AI policy strategies, the chapter tries to reveal how different governments on the continent are anticipating and framing AI techno-futures. The chapter discusses what the different policies reveal about how the governments see AI and big data compared to how the market sees them. The three policies analysed reveal that African governments foreground technological advancement, economic growth and research, and focus less on people and institutions, who have an important role to play in determining how the value in the technology may be shared equitably. One of the socio-material consequences of this approach is failing to consider people as legitimate enactors of technology, reducing them and their social institutions to passive recipients of technology and tradeable data (Ndaka et al., 2024). The chapter therefore argues that African governments and critical AI scholars must invest in policy methodologies that counteract the tendency of large and emerging tech actors to presume an inevitable journey of converting human data to monetisable knowledge and other useful products. Drawing from Fourcade & Healy (2017), this chapter proposes African governments, research institutions and critical AI scholars start seeing like a market by focusing on the apparent assemblage of power, knowledge and profits, and advancing policy frameworks that require a comprehensive account of how value is extracted from data collection processes and how this 'value' translates to the flourishing or disenfranchising of the populations from which the data is extracted.

AI policyscapes: Imagining and assembling AI policies

In the recent past, a plethora of studies has emerged to provide insights about technology governance. While this field touches on a diversity of subjects drawing from public policy, STS, philosophy, economics, ethics, innovation studies and political science, among others, the studies all seem to recognise a co-evolving and co-design role for technology and society (Ulnicane et al., 2021). AI technologies are seen not simply as mere tools, but as devices that modern societies can use to explore and create new social frontiers and achieve new social and political ends (Jasanoff, 2016). Thus as human societies evolve, they continue to imagine and re-imagine their futures, while materialising these visions in both tools and policy instruments (Jasanoff, 2016; Jasanoff & Kim, 2015). However, technology is inherently political (Latour, 2011; Jasanoff 2016), heavily imbued with political and corporate interests

(Hasselbalch, 2021) and intrinsically designed to enact political values that achieve political and corporate ends (Hecht, 2009) for those who control it. Thus, technological choices and related policies in any society are designed to "order the society, distribute the benefits and burdens, and channel power" (Jasanoff, 2016, pp. 242-243). This gives rise to the idea that AI technology does not operate in isolation; rather, it is entangled in society (Borrás & Edler, 2014; Leonardi & Rodriguez-Lluesma, 2012). Therefore it has the potential to be controlled by those who wield power, to achieve political and capitalist goals (Zhang, 2014). Hence the importance of recognising and involving a wider range of interdependent actors in (for example) public research institutions and civil society organisations in its governance, while considering the coordinating role of the government and other dominant actors (Ulnicane et al., 2021).

Considering such unequal and emerging power dynamics, and the potential of current and future technological possibilities, policy spaces should ideally be 'epistemediation' (the act of mediating between different worldviews, and perspectives, translating them and facilitating the process of knowledge co-generation) and border spaces that bridge policy and practice (Brundiers et al., 2013). They fulfil a fundamental role, defining what is relevant and important for society, in line with scholarship that views the policy actors as custodians of public good (Brundiers et al., 2013; Jahn et al., 2012; Wiek et al., 2012). It is therefore the role of policy spaces to facilitate the exchange of insights from peer agencies, different experts and other technology actors, and use those insights to shape decision-making and sustainable technology futures (Ndaka, 2023). However, more often, decisions about technology in policy spaces have been invisibly controlled by dominant knowledge holders and powerful tech actors (Jasanoff & Kim, 2015; Rosendahl et al., 2015). The AI debates have been heavily governmentalised, and are being used to promote policies that advocate for unlimited economic growth through technological advancement (Klein, 2014). Within these narratives, powerful actors such as government and technology multinationals use their financial and political influence to promote capitalist ideologies (Zhang, 2014), using nationalistic ideologies optimistically to drive unlimited technology (Mclennan, 2015; Sætra, 2021). These ideologies end up materialising in national and economic goals (Jasanoff & Kim, 2015), and therefore become engraved in policy instruments as shared visions of the future (White, 2015). Studies have shown that the discourses that shape technology policy implicitly foreground the foundational requirements of capitalist economic growth, as well as

a commitment to techno-fixes for emerging and compelling problems (Klein, 2014; Mclennan, 2015; Nobrega & Varon, 2021).

Methods and theoretical approach

This study analyses the publicly available AI policy strategies for Egypt, Mauritius, and Rwanda (Republic of Mauritius, 2018; Republic of Egypt, 2025; Republic of Rwanda, 2022; Republic of Benin 2023). It draws from various STS and feminist theories: socio-material and ontological politics (Mol, 1999; 2002), situated knowledge (Haraway, 1988), the assemblage approach (Pugh & Grove, 2017), and sociotechnical imaginaries (Jasanoff & Kim, 2015). The chapter will focus on two aspects: the policy framing, and how institutions, people and societies are engaged and/or seem to be positioned within these visions of the future. Drawing from Mol (2002), the chapter also considers the anticipation of AI technology and the conception of related policies as socio-material politics of the present (Mol, 2002) situated within unique places/spaces (Haraway, 1988), which are not shaped by strategic planning by experts (as is often believed) but by everyday decisions and practices by those who control these socio-technical assemblages (Legun & Burch, 2021), and entrenched by the 'everydayness' of the norms and practices of those who use the technologies (Mol, 2002). It also draws from Pugh & Grove (2017), using the assemblage approach to think about how policy is currently conceived and how this shapes potential AI futures. Therefore, the real sociotechnical outputs mirror the products of complex and unequally entangled socio-material environments, and are continuously shaped by embedded norms and practices. And these sociotechnical imaginaries are seen as dominant visions, which seem to be conveniently enshrined in national goals, and are used to define shared national techno-futures (Jasanoff & Kim, 2015).

Anticipatory framing of AI policy in the African context

Worldwide, governments, international organisations and corporates are actively assembling and adopting ethical guidelines and principles that seek to leverage AI benefits while mitigating the risks associated with AI use (Cowls & Floridi, 2018; Jobin et al., 2019). In recent years, over 100 such strategies, codes and frameworks have been formulated globally (Jobin et al., 2019; Schiff, 2022; Schiff et al., 2020), 30 of which are national AI strategies, and 20 or more constituting preliminary frameworks and/or formation of taskforces to produce such formal strategies (Zhang et al., 2021). Most of these strategies contain vital

information for understanding how governments are imagining AI, and hence conceiving the benefits as well as the risks and impacts to their societies (Schiff, 2021).

African nations are not only lagging behind in this exercise; those who have made some efforts seem to be permeated by certain kinds of dominant discourses. In recent years, only three African countries – Egypt, Rwanda, and Mauritius – have publicly published national AI strategies. These strategies seem to frame their goals around economic growth and technological growth, while muting other contextual economic and socio-ecological concerns that may induce inequality in the region. Furthermore, the ethical AI principles that are being developed globally – which African nations have been invoking in their various policy documents – have conspicuously muted any context-specific perspectives of the African people (Eke & Wakunuma, 2023). Most of the global ethical principles being developed are standardised in their conceptualisation, with little or no consideration of contextual meanings and implications, despite some studies showing that situated societal values have a lot of influence on how different concepts of AI ethics are defined and materialised in national and regional policy instruments (Robinson, 2020). Despite the globalised narratives, these policies essentially carry ideologies that amplify the concerns of the global north (Graham 2015). This calls for urgent contextual cultural analysis, interpretation and application of AI and related ethical principles (Ruttkamp-Bloem, 2023), to allow alternative worldviews and epistemologies to emerge legitimately in the current digital order and knowledge production systems (Ndaka et al., 2024; Rosendahl et al, 2015). Currently, the framing of AI strategies, and the assemblage of the actual policies in Africa, seems to overfocus on unlimited economic growth that sustains and is sustained by technology, as highlighted by Klein (2014), and is working towards a mythical global corporation (Mclennan, 2015). While they claim to aim at a singular future where all are represented, there is less focus on defining how the economic, social and ecological concerns and risks – especially relating to those who live in the tech margins – can be addressed explicitly. There is little or no focus on how factors such as technology value (e.g. benefits and access to them) are defined, and articulated in reality (Carolan, 2017). Inevitably, this kind of casual approach benevolently gives tech companies investing in Africa a pathway to promote their corporate agendas and consolidate power through AI technology development and massive data accrual for profits.

Africa AI policy anticipation and its apparent assemblage is still in its infancy, compared to the actual technological assemblage. In fact, the regional digital policy agendas are adopting

a wait-and-see approach to technology policy and regulation, by formulating generalised strategies that allow the unfettered growth of technology and accrual of data by large tech (Gathii, 2024). This is also reflected in the way the current technology strategies are framed to fit within some global discourses, which although framed as global, are at best hyperconnected nodes of perspectives of the global north (Graham, 2015). Most of these discourses foreground unlimited economic growth through which growth sustains and is sustained by technology, as described by Klein (2014). They also form a basis for entrenching global cooperation (Mclennan, 2015) and the advancement of technology industry growth (Wilson, 2017), eventually (re)entrenching existing colonial, capitalist and political power structures. However, these policies have paid very little attention to the assemblage of power and interests that would cause it to consider contextualised technological production (Ruttkamp-Bloem, 2023), the distributive equity of the aforementioned growth (Miller, 2020) or the mitigation of the societal risks that come with AI. Globally, AI has been hyped predominantly for its ability to address social problems (Fauset, 2008), and was recently applauded for the novel advances it offers due to increased computational power and big data (Coeckelbergh, 2022; Dignum, 2019). Its emergent character, as well as its fast growth and large-scale impact, compounds its uncertainty and ambiguity (Rotolo, Hicks & Martin, 2015). However, it appears the hype masks uncertainty and ambiguity, with the former used as an excuse for increased appetite for the massive accrual of individuals' data by big tech multinationals and private companies (Fourcade & Healy, 2017). This kind of framing also influences how governments anticipate AI, how subsequent policy instruments are framed, and whose interests end up being promoted, as well as which interests are muted.

As in the previous industrial and technological revolutions, African nations seem to be passively taking up technological ideas, essentially enacting the more powerful global discourses swirling around them (Graham, 2015). These discourses seem to promise a utopian singular future for all through AI and emerging technologies, while problematically entrenching historical power structures and capitalist growth (Zhang, 2014; Crawford, 2021. This often happens without key government and tech actors, as well as users, questioning these regimes of truth by asking critical questions – such as: Who are the beneficiaries of these discourses we are promulgating? Which are masquerading as global discourses (Graham, 2015). And this explains why technological know-how used in Africa has remained inherently the preserve of western nations (Okyere-Manu, 2021), and now the new Asian

entrants such as China, Korea and India. Thus, while the historical power structures have remained unchallenged through the last four industrial revolutions, new power brokers are entering the global arena through AI and emerging technology.

Despite emerging forms of agitation and radical debates about decolonising technology, the old, tired performance of global standards is still visible in the kind of policy framing seen in all the publicly available AI strategies for African countries. This exhibits the dissonance seen between what Africa actually requires and what is prescribed in policy – especially in the struggle between how value is defined, whose value it is, how the value may be accessed, and which impressions of this value are imposed on citizens (Carolan, 2017; 2018); but more importantly, in the balance between technological advancement and distributive equity (Miller, 2020).

The three publicly available AI strategies frame their policy objectives and targets in three ways: the economic frame, the innovation frame and the ethics frame. The economic frame amplifies skills development and workforce education, enterprise and start-ups, government and public sector improvement and economic growth. The innovation frame amplifies tech advancement, research and development (Republic of Mauritius, 2018; Republic of Egypt, 2025; Republic of Rwanda 2022). These two frames seem to dominate in shaping the three AI strategies. However, despite the frequent mentions of ethical frameworks and regulation as a focus of all three policy strategies, ethics and the regulation of AI is not explicitly discussed in terms of policy formulation and practice in AI ecosystems in Africa. This is despite global and local emphasis on the existential risks of AI, as well as other economic and socio-ecological risks of AI highlighted in various studies (e.g. Hao, 2019; Strubbell et al.; 2020; Patterson et al., 2021; Buolamwini & Gebru, 2018; Crawford, 2021; Hogan, 2015; Mytton, 2021; Baldé et al., 2017; Forti et al., 2020; Hasselbalch, 2021). In a nutshell, the three economies seem to have adopted a casual policy approach which appears to ‘hide’ in the safety of the global discourses – avoiding ruffling the feathers of existent power holders, big foreign tech investors or other donors funding initiatives that are benevolent to techno-optimistic ideologies. This framing has long-term socio-material consequences for the continent of Africa.

Institutional and people engagement

Another aspect of policy assemblage that does not emerge clearly in the current national AI strategies is the assemblage of AI and policy institutions. The three policy strategies seem to be speaking to a certain unique form of institutional arrangement and engagement. Institutions are considered as formal and informal processes and rules that shape how people are included in their actions, which also include physical infrastructure, placement offices and material relations (Legun & Burch, 2021). This concept of institutionalism draws from a series of studies (e.g. Ingram & Clay, 2000; Nee, 2005; Nee & Swedberg, 2005), and reflects the social and political arena where strategic choices about new technologies are enacted. Ideally, AI policy environments would incorporate government, corporate, industry and individual institutional environments.

In the three national AI strategies under discussion, only Rwanda seems to have outlined the role of government institutions. However, the clarity is only on the roles of government institutions, while the roles of other institutions – such as start-ups, local and foreign technology companies and civil society organisations – although mentioned, remain mostly vague. The process of AI policymaking seems to be governmentalised, probably reflecting the autocratic governance found in Rwanda. However, this governmentalisation does not in itself salvage the policy instrument from the control of systemic and globally organised tech superpowers. The silence regarding the role played by these entities speaks volumes about who may actually be invisibly driving current government policy. In general, the other two policy strategies openly elevate the role of big technology companies, research institutions and start-ups in driving the technology agenda. While not challenging the extant unequal power relations, the policy documents join the globalised techno-optimistic agendas that promote unlimited technology growth and mythical global cooperation (Klein, 2014; Mclennan, 2015). However, Mauritius takes an interesting turn by applying a multisectoral approach to the policy strategy, and defining the different roles and institutional arrangements and outputs that may emerge – albeit that the policy strategy remains largely trapped in global discourses.

Overall, in none of the three strategies are there clearcut roles, responsibilities or accountabilities placed on different institutions in their policy agendas. This leaves power voids that are ready for occupation by those who wield power in the AI industry (Hasselbalch, 2022), who have not only permeated the national policy space but are also running the policy agenda and controlling key policies in the region. This was visible in the

recently leaked African Continental Free Trade Area (AfCFTA) digital trade protocol, which provides unfettered access to and movement of African data, and special secrecy allowances promoting IP practices that erect barriers (Ndaka, Oando & Majiwa, 2025) to meaningful achievement of AfCFTA's original objectives.

People engagement

The hype about AI is accompanied by public policy controversy and governance strategies that seem to foreground the diagnosis of problems and the offering of prescriptive solutions that are mostly techno-fixes (Ndaka et al., 2024) This kind of governance is characteristic of an oligopoly, where a small number of tech companies and powerful government actors control the tech governance agenda with little or no consideration for societal needs and concerns (Schiff, 2021; Ndaka et al., 2024). The widespread concerns and controversies about the ability of AI ethics to solve AI issues highlight the vagueness in the way these principles might be interpreted and implemented; and this is working to serve the vested interests of powerful AI actors who are already making suggestions for self-regulation, strategic delays and avoidance of AI regulation, arguing that these factors might slow innovation (Hagendorff, 2020; Mittelstadt, 2019).

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In these conversations, the voices of individual citizens, corporate users and civil society seem most often to be excluded. Schiff (2021) argued that most global AI strategies have failed to mainstream the role of education and awareness about AI and the agendas of key decisionmakers. This is despite the major concerns raised about AI, which range from the consolidation and concentration of power, wealth and social inequality to discrimination (Hasselbalch, 2022; Buolamwini & Gebru, 2018; Broussard, 2018; Fry, 2018). People and society form the core of AI, because AI cannot be isolated from the society that shapes it and for whom it is created. It not only shapes and is shaped by society, but also co-evolves with it; which is why it is a sociotechnical system (Hasselbalch, 2021). There are therefore high expectations of public engagement, in multiple nodes, to ensure diversity, representation, representativeness and equality in AI governance, development and use – but is this happening?

Despite these expectations, most strategies in Africa seem to mute this conversation, with little or no mention of how governments and tech actors intend to build that awareness or engage other actors, such as civil society and public benefits organisations, in the

development and use of AI and related ethical and regulation principles. This is despite new forms of agitation against some micro-aggressions associated with the AI industry in Africa. For instance, Kenyan gig labourers have been highlighting the unfair working conditions endured by the 'invisible' labourers powering the AI industry (Sarasvati, 2023); there have been mentions of both past and current use of AI to fuel conflict through misinformation and disinformation in some African countries (Besaw & Filitz, 2019); and there are many ways in which AI is used daily on social media platforms such as Facebook, TikTok and X to drive negative gender norms (Ndaka et al., 2024), skewed political agendas and hate speech across the continent through algorithmic reward systems and engagement (Allyn, 2021; Naim, 2023).

In the three policy strategies, the concept of inclusion largely focuses on skills development and research, as well as the inclusion of 'missing data'. But who is being included, why are they being included, and in what? What is inclusion, if one is included in structures from which one has previously experienced systemic exclusion? A more critical question is, why is that data 'missing'? And why is it important now? Critically, what is missing is the concept of creating awareness and of engaging people in the conception and co-creation of these solutions and related ethical and governance principles. This kind of inclusion invites people into a shared space where they can ask critical questions about what their exclusion or inclusion means, attend to the unequal power dynamics, and define what meaningful inclusion means for them; but more importantly, bring their rich perspectives into the technologies being designed for them (Ndaka, 2023). However, in these strategies the AI industry is presented as a creator of solutions for people, and a fixer of social problems (Fauset, 2008). And the people are expected to passively take up these solutions – solutions prescribed predominantly by a few powerful actors, who also seem to not only narrowly define African societal problems (Ndaka et al., 2024), but also define what benefits are accessible, who accesses them, and what is important and profitable for the public (Carolan, 2017; 2018).

Failure to engage people in defining their societal problems, examine different policy agendas (including the hidden interests and politics) and define other aspects such as access to and benefits and risks of AI – including contextually defining and interpreting these concepts (Rosendahl et al., 2015; Carolan, 2017; Ruttkamp-Bloem, 2023) – risks the creation of technologies and related policy frameworks that only foreground the political and

corporate interests of large technology companies, powerful government actors and other corporate actors (Zhang, 2014). This in itself allows unfettered access by these entities to people and their data, thereby reducing them to recipients and performers of the technology 'regimes of truth' provided by large tech actors (Graham, 2015) and their resulting technology possibilities. Citizens own the data that is being used to develop these AI technologies into useful tools, and therefore they have legitimate agency in deciding how their data is accessed, how it is used and how the value emerging from the products is distributed (Carolan, 2017; Ndaka, Oando & Majiwa, 2025). Lack of engagement further risks low adoption and scalability of otherwise important technology solutions (Kieti et al., 2022).

The processes involving AI development and use are largely characterised by a symphonic dance of different interests, power and politics (Darnhofer, 2020; Hoffman, 1990; Hasselbalch, 2022), which may enable or constrict how different actors conceive and enact the AI futures (Ndaka, 2023) on the continent. In this context, the more privileged groups often determine which values are emphasised in technology, which and whose benefits are considered, and how the benefits are distributed, as well as imposing those values on larger society (Carolan, 2018). It is therefore essential for different nodes of publics to be involved in conceiving and actualising these AI futures through co-assembling policies that govern AI development and use.

Table 1 – A comparison of the unique character of different country AI strategies

Aspect/policy	**Rwanda**	**Eqypt**	**Mauritius**
Frames	Economic, innovation and ethics	Economic, innovation and ethics	Economic, innovation and ethics
Institutional dominance (whose policy interests will drive the agenda)	Government	Research institutions, start-ups and tech companies	Research institutions, start-ups and tech companies
People & democracy	Almost invisible	Almost invisible	An effort to focus on people's needs

			through a sectoral approach, but then slips into standardised policy approach
Unique things about policy	Focus on government role in governing technology dominance from external forces	Focus on being technology leaders in the region	Focus on addressing uniquely situated and sectorally defined needs of Mauritius
What policies reveal	A colonised autocracy	A colonised theocracy	A colonised democracy

Seeing like the market: Data classification and commodification

This chapter has shown that AI policy discussions in Africa are still hierarchically structured to serve economic and national goals, and that they consolidate power for a privileged few, especially technology owners and other actors who have political and economic interests. This is visible in the framing, in the lean and/or selective institutional engagement, and in the lack of a clear role for the people in these instruments. This is also happening in an environment where invisible and complex activities, as well as politics and interests that involve individuals' data, are actively happening in the internet space, as highlighted by Hasselbalch (2021).

In the history of markets, while data classification and rules for calculation and prediction have been used for a long time to maximise profitability, the new algorithmic sun is illuminating a new era in the way these actions are managed – because they can all be managed at once, continuously, and at a faster speed, and can potentially follow individuals indefinitely (Fourcade & Healy, 2017). Data is no longer collected and classified in the traditional manner. There are new, sophisticated forms of collection and scoring, focusing on new types of data such as digital images and emotional and behavioural data, which have become increasingly useful in the current data-driven economic decision-making – which has further introduced new forms of human categorisation and data sharing (Ibrahim et al., 2021; Gepp et al., 2021). The AI-enabled market has become the classifier, the enabler/disabler, and the fixer, while personal records, their scores and their categories have been repurposed into

tradable objects (Fourcade & Healy, 2017). Currently the market is experiencing a fast-paced commodification and 'currencification' of people and their data.

In a market setting, this starts with the dragnet of massive data collection. Many reasons are used to legitimise this, e.g. national interests such as security and economic planning, and this gives the market free exposure to a vast sea of personal data. What is never clearly outlined is the actual utility of this massive data, which based on scope and scale makes questionable the ability of experts to analyse it and the technical methods used to analyse it, as well as the morality of the classification and consolidation of power (Fourcade & Healy, 2017). Then there is scoring, which involves AI systems that can decide which rules and variables they can use for prediction, scoring and classification of data for themselves – an activity mostly done in a manner that is opaque to most users (Burrell, 2016; Burrell & Fourcade 2021). While the previous way of doing things broadly applied actuarial methods of rating and scoring consumers, AI has scaled this up in a data-driven economy. Further, the basis for scoring, rating and evaluation using AI is barely predictable, let alone knowable to those who rely on these systems (Fourcade & Healy, 2017). Thus, the new automated classification is not only hidden in sophisticatedly complexified activities that invisibly permeate the users' 'everydayness' in a way that is hard to notice (Diefenbach et al., 2022; Aurigi, 2006; Augusto, 2008), but also has socio-material consequences (Legun & Burch, 2021). This opaque classification activity inherently invisibilises the role of human intermediaries, arguably leading them to extinction, as summed up by Fourcade & Healy (2017): "If the recorded individual comes to full view, the recording individual disappears into the background, arguably to the point of extinction." This especially targets other knowledge systems outside data science and the larger STEM space. While human beings are reduced to currencified numbers or data, the knowledge systems that have historically provided solutions to problems are fenced off.

The use of AI for scoring has also led to encroachment on people's private lives, and other unanticipated consequences such as discrimination based on race, marital status and sex (Citron & Pasquale, 20140. This is often amplified by the off-label use of credit scores in decision-making, which further affects people's positions in labour and/or housing markets (Fourcade & Healy, 2017). The ritual application of both massive data collection and scoring, regardless of whether individuals are experts or laity, has led to the segmentation of some populations, and the eventual exclusion of same from the market. In a global system where

Africa and bodies from the global majority are inherently domiciled in the margins, one wonders what possibilities African data entering these systems can produce to the detriment of the region – especially when the market views the data holders as commodifiable assets. Thus, data in the market is seen as an asset and/or a commodity in the way it is collected and processed. At the same time these activities are sophisticatedly hidden – essentially masking the main goal, which is profit for the large tech companies and political mileage for powerful political actors. The point of concern is in the way individual and organisational data and related components are used. Fourcade and Healy (2017) point out that companies use the collected data for prediction and scoring, so as to develop behavioural interventions through the creation of profitable tools and services. In fact, many companies are using a combination of emotional manipulations such as academically supported publications and algorithmic manipulation to achieve their economic ends (Kramer & Manzeschke, 2021; Kramer 2014; Fourcade & Healy, 2017). They specifically use these emotional manipulations to create and propagate new truth claims that help to moral-wash and greenwash their activities, while delineating new algorithmically-defined spaces where individuals and entities – including environments – are governed by other powerful entities without being aware of it (Kramer, 2014). Fundamentally, profits drive the whole AI and big data agenda; as argued by Fourcade and Healy (2017, p. 6), "The desire for firms to experiment on their own user base is driven mostly by their need to develop accurate, effective and socially acceptable services in a way that benefits the company." This is obviously done by using massive amounts of attained data to score their tech users and continuously develop interventions in ways that maximise profits, with minimal consideration of and accountability to the technology users. This explains why the deployment of unfettered mass data collection e.g. in the case of Kenya was tagged as inclusion of African data (Miriri, 2023). Worse are the socio-material consequences associated with the use of AI for surveillance capitalism to re-introduce colonial norms through mass surveillance in the name of security. For instance, in South Africa, there are concerns that unregulated use of AI systems to monitor citizens is bringing back apartheid in digital form (Hao & Swart, 2022).

Future implications of opaque policy assemblage

With decision-making by algorithm, accuracy and acceptability are important – hence the increased appetite for vast amounts of data, whether it is useful now or will be in the future (Fourcade & Healy, 2017). But who owns the data? How is it obtained? And how do the legitimate data owners receive benefit for the value of their data? The reality of the activities

behind AI and big data – how data is obtained, how it is used for classification and how this is translated to tradable products and services – creates new power structures that introduce new economic and epistemic tensions between those who are creating these technologies and the end users, especially in cases where there are contextual differences (Ibrahim et al., 2021). While this creates a lucrative space for powerful tech companies to create wealth through data currencification and commodification of people, it also introduces new forms of inequality characterised by knowledge and systemic exclusion, and masked in opaqueness, especially in the way publicly available data is governed. In this big data era, even state-produced data that was formerly inaccessible in practicality has already been brought into the market sphere, and is being repurposed to serve the ever-increasing data appetite of private entities and data brokers who rebrand it and resell it to third parties, or sometimes government itself (Fourcade & Healy, 2017). This comes with serious socio-material consequences, whether known or not. To this extent, then, algorithmic decision-making leaves a lot to be questioned in terms of accountability for the invisible processes and other, related ethical issues (Lehner et al., 2022; Nikidehaghani et al., 2022). The human activities therein are not only opaque but sophisticatedly complexified in these digital spaces, in such a way that they can easily trivialise the epistemic economic and social injustices that may be meted out by and through the AI systems.

This chapter argues that formulating policies that openly frame AI in favour of powerful tech companies, and that omit clear definitions of the role of diverse institutions and the people who develop and use AI, gives the entities in power unfettered access to personal and institutional data, channelling the economic and social benefits that come from the useful products generated from this data to a few powerful tech multinationals and corporate and political actors. Further, as argued earlier in this chapter, even where the benefits are accessible, access to the benefits, which benefits are accessible and by whom are impressions imposed by those who are in power (Carolan, 2017). This kind of scenario creates new, technologically-driven power structures that allow those in power to continue thriving at the expense of those who provide the data – further entrenching wealth inequality. This chapter therefore argues that African governments, critical AI scholars and other AI-for-good actors must invest in policy methodologies that counteract the tendency of large and emerging tech actors to presume an inevitable journey of converting data to monetisable knowledge and other useful products. This chapter proposes that governments and AI-critical scholars should start seeing like a market by focusing on the assemblage of power, knowledge and profits,

and advancing policy frameworks that require a comprehensive account of how value is extracted from data collection processes and how this 'value' translates to the flourishing or disenfranchising of the populations from which the data is extracted. 'Seeing like a market' would help researchers and policymakers to adopt a balanced approach to how AI enters society, an approach that does not elevate technologies driven by optimism that only foreground capitalist values and ignore the other socio-material dynamics and knowledges that have persuasive claims in the region.

Conclusion

Artificial intelligence has enjoyed a recent upsurge in interest in developing countries as AI systems begin to be integrated into social and industrial development. However, in the context of Africa, AI policy assemblage is still in its infancy, compared to the evolution of the physical technology. This chapter thus explored how governments throughout the continent are anticipating AI technologies, highlighting the critical role that framing, institutions and people play in assembling and re-assembling public policies that govern the creation and application of these technologies in society. The chapter argued that African governments and critical AI scholars must invest in policy methodologies that counteract the tendency of large and emerging tech actors to presume an inevitable journey of converting data to monetisable knowledge and other useful products. It demonstrated the disconnect between the societal needs, political agendas and policies created to serve these societies in the way policymakers are creating national policies, through a thorough policy study and analysis of publicly available AI policy frameworks in the region. The analysis shows that African policies foreground the corporate and political interests of the tech industry by focusing on the unlimited growth of AI tech, with a lack of focus on how power is assembled and entrenched in and through AI ecosystems. The analysis included determining how these policy measures fit into the agendas for social, ecological and economic development at local, national and international level. The main thrust of the argument is that African governments and scholars of AI must invest in policy techniques that challenge the optimistic assumption that major tech companies are attempting to achieve societal agendas, and that what they create will inevitably transform into benefits for wider society. Rather, they should focus on AI technology as a sociotechnical assemblage that can either benefit or disenfranchise society.

Drawing on Fourcade and Healy's (2017) idea of ‘seeing like a market’, the chapter argues for the redirecting of attention from unfettered and uncritiqued technology growth to how the accumulation of power, information and financial gain inside AI ecosystems is being achieved by powerful technology actors to the detriment of the region. It emphasises how crucial it is to develop policy frameworks that require a thorough accounting of the value that is derived from data collecting procedures, and how this ‘value’ affects the welfare or disenfranchisement of the communities that provide the data. The chapter urges a proactive stance, highlighting possible gaps and difficulties in democratic participation with AI techno-futures. It promotes the adoption of deliberative policy methods involving multiple stakeholders by governments and AI scholars. By doing this, it offers a mechanism for many stakeholders to actively participate in the creation of AI policy, guaranteeing that the advantages of these technologies are shared fairly and that any risks are reduced through open and inclusive decision-making procedures. In simple terms, this chapter emphasises how important it is to have deliberative policy assemblage towards forward-thinking policy measures, in order to navigate the changing AI landscape in Africa and support inclusive and sustainable development.

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