Old Cracks, New Tech

Artificial Intelligence, Human Rights and Good Governance in Highly Fragmented and Socially Stratified Societies: The Case of Kenya

Nanjala Nyabola

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Written & Researched by Nanjala Nyabola

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UNIVERSITY OF OXFORD

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EXECUTIVE SUMMARY

Artificial intelligence (AI) systems are increasingly touted as solutions to many complex social and political issues around the world, particularly in developing countries like Kenya. Yet AI has also exacerbated cleavages and divisions in society, in part because those who build the technology often do not have a strong understanding of the politics of the societies in which the technology is deployed. An AI system is only as good as the presumptions that are built into it, and only as helpful as is allowed by the context in which it is deployed. Often those presumptions are loaded with implicit biases and discriminatory intent that can be hard to discern, particularly when the systems and platforms are designed elsewhere.

Current projections on the use of AI in Africa are modest given the relatively low Internet penetration. Yet AI is already in use there for industrial and non-commercial purposes, particularly in agriculture, healthcare, and financial services. Since the Internet was introduced there in 1993, Kenya has established a reputation for rapid digital uptake. The Kenyan government's Internet policy has been both proactive and reactive to citizens' behaviour, acting both as an enabler and a deterrent to the use of technology in public life. In 2018 the government formed a task force on AI and blockchain to encourage the adoption of these technologies. In July 2019, the task force produced its first report. Key applications for the technology are framed around the Big Four Agenda, a policy orientation to focus all government energy on four key sectors—affordable healthcare, food security, manufacturing, and housing; the report adds cybersecurity and land titling to these. The key elements of the report are as follows:

- In order for Kenya to consolidate its position as a regional and global leader in technology uptake, it is critical for the government to create a permissive regulatory environment that encourages innovation and uptake of AI.
- By increasing transparency in transactions, AI and blockchain can together eliminate inefficiencies caused by corruption.
- The government needs to make investments in infrastructure to create an enabling environment for these technologies.
- The successful uptake of these technologies will only be possible if there is widespread education within the society.

The balance between AI and distributed ledger technology (DLT) in the report suggests that the government of Kenya sees DLT as of far more use than AI in improving governance in Kenya. On AI, the report is somewhat less specific, but the two practical examples offered as potential avenues are local, indicating that the private sector in Kenya outpaces the public sector in the use of AI. The report identifies three core value propositions for AI in Kenya—data analytics, efficiency in decision-making, and predictive analysis. The underlying premise is that AI can improve decision-making in governance in Kenya, increasing efficiency and accelerating innovation. To date, the only recommendation from the report that has begun to be implemented is the creation of a single identity database that will form the bedrock of government administration.

The Kenyan government's policy on AI and blockchain technology shows that it is eager to make these a central pillar of the country's technology policy. But with a mixed record on government-led involvement in technology, it is important to recall that technology is political, that is, it is intimately connected to power relations between various actors. Deploying AI in highly fragmented societies like Kenya risks deepening existing cleavages, including those around class and identity, and the ethics of using AI in an industrial context versus a public-facing context are different. Like many developing countries, Kenya is only now starting to develop legal frameworks to govern the use of technology, and until the legal and regulatory framework is strong, this report recommends:

- Conducting a deeper and more wide-ranging analysis of the political implications of existing and proposed applications of AI in Kenya, including comparisons with other countries where similar technology has been deployed.
- Conducting a comprehensive review of ongoing implementations of AI in both private and public contexts in Kenya in order to identify existing legal and policy gaps.
- Conducting deeper legal research into developing meaningful legislation to govern the development and deployment of AI technology in Kenya. In particular, a framework for the implementation of the Data Protection Act (2019) vis-à-vis AI and blockchain technology is urgently required.
- Conducting training for local political actors and researchers on the risks and opportunities for AI to empower them to independently evaluate proposed interventions with due attention to the local context.

1 INTRODUCTION

Artificial intelligence (AI) systems are increasingly touted as solutions to many complex social and political issues around the world. The promise of streamlined or efficient governance aided by technology is seductive, particularly in poor and developing countries where state budgets are tight and shrinking. The promise of AI in governance is significant, with governments using such systems in financial and electoral governance, in training low-waged employees at scale, and in providing crucial services to areas well served with mobile telephones but not with services like healthcare. And in the private sector, AI is already a core part of banking, e-commerce, and the distribution of goods and services, promising, above all else, efficiency in the allocation of resources like time and money.

Yet AI has also exacerbated many cleavages and divisions in societies where it is deployed, in part because those who build the technology often do not have a sophisticated enough understanding of the politics of the societies in which the technology is rolled out. An AI system is only as good as the presumptions that are built into it, and as helpful as the context in which they are deployed permits. In many societies those presumptions are loaded with implicit biases and discriminatory intent that can be hard to discern, particularly when the systems and platforms are built outside the societies in which they are used. For example, social networking sites developed by US and Chinese companies have been used in African and Asian countries to foment ethnic hatred, and while AI has been touted as a solution to these challenges the preconfigured biases in the algorithms that manage content on these sites have repeatedly amplified hate speech and other negative content rather than moderate it; to give a single example, the AI that powers Facebook's algorithms has been cited as a driver of hate speech and ethnic violence in Ethiopia.[1] Without critical reflection on the societal context in which the AI will be deployed, AI systems do not deliver efficiencies: they deepen exclusion and polarisation.

In recent years, there has been a push to expand the use of AI in African countries, led by government and private sector actors. In 2018 the government of Kenya announced the formation of a government task force on AI and blockchain, aimed at encouraging the adoption of these technologies in the areas of financial inclusion, cybersecurity, land registration, elections, identity systems, and the overall delivery of public services.[2] Coming hot on the heels of the deeply flawed digital election of 2017, the announcement

was met with considerable scepticism and disbelief, as the administration had failed to demonstrate that it had the capacity to use technology in delivering political results or, indeed, that it was interested in this. Even so, there has been significant growth in private sector applications for AI technology.

The case of Kenya can therefore provide a crucial entry point for understanding the politics of implementing AI systems in highly fragmented societies. Kenya is chosen because it is one of the countries in Africa that have openly embraced AI not just in government but also in the private sector, and it has a significant history of using technology in public life.[3] This policy brief will therefore unite an examination of Kenya's governance challenges and the stated promises of those wishing to deploy AI in this context with a brief examination of some case studies of implementation already underway and the potential pitfalls that have arisen. Beyond policymaking and technical soundness, what should AI advocates pay attention to? And what questions arise from a human rights analysis of how AI might affect highly fragmented and socially stratified societies like Kenya? By answering these key questions, the brief hopes to map the state of the discourse and suggest an inclusive and just way forward.

2 KENYA: POLITICAL HISTORY

Ambivalence is the dominant characteristic in policymaking around technology in Kenya, with key advances quickly undermined by restrictive legislation. Since the Internet was introduced to the country in 1993, there has been rapid digital uptake, although like other developing countries this has been constrained by cost and lack of infrastructure. Over the following years, mobile phones have become the primary method through which Kenyans access the Internet, creating a climate that is open to tech advances but slower to build the infrastructure to sustain it. Today, Kenya has one of the highest levels of mobile penetration in the developing world at an estimated 83% in 2018 (compared to 23% across Africa). According to the Kenya National Bureau of Statistics, Internet subscription rates (meaning regular Internet usage) grew from just under 30% in June 2016 to just over 41% in 2018.[4] More Kenyans are connecting to the Internet more quickly and more cheaply than ever, and the government has noticed.

The Kenyan government's Internet policy has been both proactive and reactive to citizens' behaviour, acting both as an enabler and a deterrent to the uptake and use of

technology in public life. For instance, the split of the Kenya Posts and Telecommunications Corporation into multiple entities was prompted by the neoliberal push to privatise public utilities in Africa, but the decision to retain a significant government shareholding in the resulting entities allowed the country to continue to benefit financially from those companies. It was the active policy of the Ministry of Communications to invest in the fibre-optic network and the dramatic expansion of mobile connectivity that allowed Kenya to establish itself as a global leader in mobile money, fintech, and other critical spheres of information and communications technology (ICT). Yet more recently, government policy has focussed on curtailing participation in the tech sector, increasing taxation, curbing freedom of expression, and expanding government influence over the nascent sector, which critics insist has been to the detriment of the sector as a whole.

This pattern of contradictions is replicated for AI, where significant opportunities are undermined by the political and social context. In theory, AI has been present in the country since the first Internet platforms were introduced in the country, and AI modelling and computation has been used in the private sector, particularly in insurance and banking, since it was an option. Similarly, the use of AI in social media and communications platforms has had a significant impact on public discourse in Kenya from the time the platforms were introduced, particularly in election periods. Government policy in response to these developments has been mixed, with some major public policy declarations but very little in terms of implementation and visible action. After extended periods of an enabling environment, the government routinely turns to technology as an opportunity to deepen state authority, and the authoritarian streak suffocates any potential positive developments in the tech space. Given the nascence of the space, much of the analysis in this policy brief examines the possible impact of AI policy rather than AI practice in Kenya, as there are no significant public actions whose outcomes can be measured or evaluated.

3 DISTRIBUTED LEDGER TECHNOLOGY AND ARTIFICIAL INTELLIGENCE TASKFORCE

Current projections on the use of AI in Africa are modest, because of the relatively low Internet penetration in the region. Still, statistics and industry analysis firm Technavio predicts significant growth in the use of AI around the world, particularly in predictive maintenance and machine

inspection, production planning, and quality control, affirming that the major uses of AI at the moment are in industrial-facing applications.

AI is already in use for both industrial and non-commercial purposes in Africa, particularly in agriculture, healthcare, and financial services.[5] In South Africa, AI has been used to predict mine water quality in order to mitigate the environmental impact of the country's main industry.[6] In Zambia, AI has been used to screen for major vision-threatening diabetes.[7] And in Kenya, AI has been used for example to try and integrate technology into indigenous approaches to drought prediction.[8] AI is not new to Africa. What is recent is the increasing use of AI in public-facing applications, and this requires a detailed analysis of government policy alongside details of current practice.

In February 2018, the Kenya government launched a task force focussing on blockchain and AI technologies, officially known as the Distributed Ledgers Technology and Artificial Intelligence Taskforce.[9] Led by some of the most important figures in Kenya's digital transformation—such as the former cabinet secretary, Bitange Ndemo, and the iHub co-founder, Juliana Rotich—the task force is charged with developing a roadmap for Kenya's uptake of ICT in key sectors like financial inclusion, cybersecurity, elections, and identity. The first task for the commission was to make recommendations on how the government can use emerging technologies over the next five years, and to establish a broad strategy for subsequent milestones in 2027 and 2032. Coming on the heels of a hotly contested election, the launch of the task force was met with some ambivalence amongst the broader population, especially as the country seemed to be hurtling towards an economic crisis.[10]

In July 2019, the task force launched its first report, examining the way both blockchain and AI could be used to transform Kenya's economy.[11] The 123-page report broadly examines Kenya's advances in Internet uptake and how these can be secured and turned into opportunities for improved governance and engagement between citizens and their government. Key applications for the technology are framed around President Uhuru Kenyatta's Big Four Agenda, a policy orientation that focusses government energy on four key sectors: affordable healthcare, food security, manufacturing, and housing. The report supplements these Big Four Agenda items with cybersecurity and land titling, supplementary issues that have significant political implications in a country facing terrorist threats and generations of violence triggered by land.[12,p.13] The report identifies corruption as the major

obstacle in the way of Kenya's "nation-building" and argues that technology can address the problems it creates.[12,p.13]

The policy document focusses on how distributed ledger technology (DLT, also known as blockchain) and AI applications can create efficiencies that work towards achieving this goal, using examples from other regions as well as two standout examples from within Kenya to supplement the argument. At the same time, the report identifies key sectors in other countries where AI is already being deployed, including elections, agriculture, financial inclusion, and the delivery of public services more broadly.[12,p.14] Given the relatively low uptake of these technologies on the continent, many of the examples offered are from Europe, Asia, and North America, with notable examples from African countries like Mauritius, South Africa, and Tunisia. The underlying argument in the report appears to be that other African countries are already looking towards taking up these technologies and it is a major risk to Kenya's position for the country not to accelerate the integration of AI and DLT technology into the management of government projects.

The key elements of the report are as follows:

- AI and other technologies are already being deployed in other parts of the world, and in order for Kenya to consolidate its position as a regional and global leader in the uptake of technology, it is critical for the government to create a permissive regulatory environment that encourages innovation and uptake.
- The biggest challenge to Kenya's development is corruption and the inefficiencies that it creates. AI and blockchain can together be used to eliminate these inefficiencies by increasing transparency in transactions.
- The government also needs to make several key investments in infrastructure in order to create an enabling environment for these technologies. These investments include expanding the domestic fibre-optic network in order to boost connectivity across the country.
- The successful uptake of these technologies will only be possible if there is widespread education within the society in order to make sure that citizens understand the technologies and their implications.

The report also makes practical recommendations for the ministry that would assist in the implementation of its recommendations. These practical recommendations include the creation of regulatory sandboxes that would allow innovators to pioneer technology without the fear of contravening existing legislation, by suspending the application of existing laws that may prohibit some AI activities.[12,p.79] It proposes the operationalisation of specific legislation like the Computer Misuse and Cybercrimes Act (2018) and the implementation of the Huduma Number single source of truth identity system as enabling legislation that would accelerate the uptake of DLT and AI technology.[12,p.102] Furthermore, the report recommends increasing investment and support and particularly private–public partnerships as a mechanism for funding developments in this space, and proposes the creation of a national brains trust that would help the ministry anticipate developments in AI around the world and prepare for their impact on Kenya.[12,p.98]

The balance between AI and DLT in the report suggests that the government of Kenya sees DLT as far more useful than AI in improving governance in Kenya. As stated, the underlying value proposition for government to even become involved in these spaces is the elimination of corruption, which is perhaps the biggest public policy challenge in Kenya today. The promise of an independent system to monitor public and private transactions, as well as to allow independent scrutiny of government finances, is significant, and the bulk of the report focusses on applying this value proposition to areas of the Big Four Agenda.

On AI, the report is somewhat less specific, but the two practical examples offered as potential avenues are local, indicating that the private sector in Kenya outpaces the public in the use of AI. The first is Twiga Foods, a Kenyan agricultural start-up, which is offered as an example where AI is used alongside blockchain to both track the circulation of goods and provide independently verifiable credit information that allows the company to extend credit to small- and medium-scale customers who would otherwise be ineligible for such credit.[12,p.39] The second example is another Kenyan start-up, M-Shule, which uses AI to provide an adaptive learning experience to students by continuously assessing their competency and tailoring the lessons to their needs.[12,p.39] The fact that these are examples of indigenously developed AI applications boosts the argument that Kenya is close to AI-ready and only requires an enabling policy environment to increase uptake and reach.

Within this context, the report identifies three core value propositions for AI in Kenya: data analytics, efficiency in

decision-making, and predictive analysis. The underlying premise is that with the right size and scale of information, AI can improve decision-making in governance in Kenya, increasing efficiency and accelerating innovation.

With regard to the Big Four Agenda, the reports argues that AI might make healthcare more affordable in Kenya by reducing triage times and bringing specialised doctors closer to patients.[12,p.41] It also suggests that AI might enhance meteorological predictive power and make it possible to analyse large weather data sets to predict changes in the climate and therefore events like droughts and pest attacks.[12,p.41] The report suggests that automation might improve the quality of manufacturing by anticipating machine failure and reducing waste.[12,p.41] Finally, with regard to housing the report suggests that AI can create more effective search tools for landlords, renters, and buyers, and assist with the valuation of land and property.[12,p.41]

With these proposals in mind, the report argues that the key challenges that AI presents for Kenya are:

- The possibility of mass unemployment, particularly in the civil service, as tasks become automated
- Violations of privacy caused by the expansion of the capacity of the state to undertake surveillance and collect data on its citizens
- The broad risk of unethical AI as experienced in other jurisdictions, e.g. encoding bias and training systems on bad data
- The weaponisation of AI in regard to cybersecurity but also physical security, e.g. in the use of drones

As such the report encourages the adoption of local research as a method of developing responsive solutions to the AI challenge in Kenya more broadly.[12,p.46] Currently, the global conversation on AI is dominated by Western and Eastern perspective from countries that do not face the same social and political challenges that confront developing countries with highly stratified societies. Similarly, existing technologies respond to challenges identified within the contexts within which they were created and do not reflect the priorities that the Kenyan government would set for itself. The report asserts that because local data to train such AI platforms is scarce, many existing systems are trained on data from countries that do not mimic Kenya's reality and therefore the risks of poorly applied technologies or dangerous outcomes are high.[12,p.43]

4 CASE STUDIES

The following case studies highlight the state of AI use in Kenya, including examples cited by the government in their AI and blockchain policy document. Much of the information around these technologies is proprietary or has not been made public, so the analysis here is restricted to publicly available information. Overall the case studies indicate that there is a growing interest in the use of AI in various sectors in Kenya, but this implementation requires more robust legal and human rights analysis in order to protect against potential abuse.

Twiga Foods

The task force's report singled out Twiga Foods as an example of what could be achieved in Kenya through the use of AI and blockchain. Twiga Foods is a Kenyan start-up founded in 2014 that uses technology to streamline the delivery of agricultural produce to market.[13] According to its website, Twiga uses AI and blockchain technology to "organise informal retail in the country" by leveraging technology to overcome inefficiencies in the country's retail produce market. Twiga has attracted significant international attention, receiving a $30 million loan from the International Finance Corporation to support farmers within its networks.[14] They operate using a mobile-based, cashless business-to-business retail platform that they argue reduces waste by making it possible for farmers to only bring goods to the market when necessary. Twiga's use of AI is still in an early stage and public information is scarce, but it has partnered with Safaricom, the largest mobile operator in the country. It is thus clear that other organisations, as well as the government, believe that it can lead the way in industry-facing applications of AI.

M-Shule

M-Shule represents the most ambitious, public-facing deployment of AI in Kenya to date. Founded in 2016, it is a mobile-based learning-management platform that develops and distributes educational content to students, adapting to their capabilities and interests over time.[15] A 2018 pilot across 15 schools ran successfully and the founders believe that the process can be scaled up throughout the region.[16] A broader roll-out of the platform has been affected by the coronavirus pandemic, which shut schools across the country, although the platform has quickly adapted to providing health and safety information to learners during

the pandemic.[17] An ongoing curriculum review process has also slowed down the deployment of the platform.

A crucial lesson from the M-Shule experience is that without broader solid policymaking in the relevant sector—in this case education—even the most advanced technology will flounder. The major risks for education-based AI applications are the privacy rights of minors, the importance of investing in infrastructure, and the risks of consolidating inequality in countries like Kenya with a significant population of rural poor who do not have regular access to mobile phones or the Internet. However, there are also broader political risks, as the mismanagement of the education sector more broadly not only affects operations but also the feedback loop that allows for responsive citizen-facing deployments of AI.

AI in Healthcare

AI has been piloted in some significant instances in healthcare management in Kenya. It is worth noting however that the exact parameters of what counts as a use of AI in health remains contested.[18,p.1] For most researchers, the focus has been on the use of narrow AI—that is, teaching a computer how to perform a single analytical task well—rather than the broad-ranging application of "artificial general intelligence".[18] For example, in 2019, a partnership between the University of Helsinki and the Kinondo Health Centre in Kenya began a project to use AI to analyse Pap smears and facilitate screening and catching abnormal cells before cancer develops.[19,p.1] The project's leaders suggest that the use of technology in this way can reduce the dependence on highly skilled specialists in the Kenyan context where both pathologists and the needed specialised equipment are rare, and in the case of cervical cancer where the presence of the disease is not otherwise detected until it is too late to treat.[19,p.5] In an early paper giving the results of the study, the authors concluded that "advanced digital microscopy diagnostics supported by machine learning algorithms is implementable in rural, resource-constrained areas, and can achieve a diagnostic accuracy close to the level of highly trained experts".[20]

The risks of AI become more apparent when they are connected to predictive capacities, specifically on the perception of risk. A 2019 study with a stated aim of developing strategies to prioritise individuals at higher risk of acquiring HIV for prevention strategies found that machine learning improved the classification of individuals at risk.[21] However, the indicators on which the study was based not only reflect a static view of high-risk populations but also a

subjective evaluation of risk. Thus, while "HIV-infected spouse" may be a stable risk category, "young woman" reflects only the current situation, while in the past other sections of the population have been at higher risk.[22] The study's hypothesis that machine learning would identify high-risk individuals more efficiently is predicated on a disease moving through societies in exactly same way, but the science shows that the relative risk of different population subsets with regard to HIV/AIDS varies considerably over time.

5 FINDINGS

To date, the only recommendation from the report of the Distributed Ledgers Technology and Artificial Intelligence Taskforce that has begun to be implemented is the creation of a single source of truth identity database that will form the bedrock of government administration. The National Integrated Identity Management System (NIIMS) or Huduma Number actually represents the culmination of decades of effort to try and reform Kenya's identity system.[23] As with the Aadhaar system in India, the system proposes the collection of biometric data from everyone over the age of six who is resident in Kenyan territory, although existing government documentation on how this data will be used remains vague except for the promise that its use will be aligned to the Big Four Agenda.[24] Yet Kenya's existing identity system is not only grounded in a history of exclusion but is also biased and discriminatory against minority groups.[25] Nonetheless, in February 2019, the Huduma Number data collection exercise was announced, with many threats of denial of service for those who did not register.

In fact, the possibilities for implementing AI in Kenya rest on the argument that vast amounts of data about the citizens must be collected and then monetised. The task force report explicitly names profitability as a desirable outcome from the use of AI, even though it proposes that the government act as the primary data-collecting entity. Yet the report was drafted prior to the 2019 Data Protection Act, and it is telling that major concerns about privacy and autonomy were not factored into the calculations on how AI platforms would be deployed.

As such, members of minority groups sued the government based on fears that the new system did nothing to address the biases already encoded in the existing system, and that the coercion that characterised the implementation was unconstitutional.[26] Based on the demands made in that litigation, the government of Kenya was forced not only to

suspend the Huduma Number initiative but to hastily pass a data protection and privacy law that would give life to Article 31 of the Constitution on a right to privacy. The challenges of the roll-out of the Huduma Number point to the broader contextual and governance challenges of implementing Kenya's AI policy.

Another challenge in discussing AI is that the very definition of AI, and by extension its uses and risks, is itself contested. The Kenyan government's policy on AI also fails to be clear, which in turn makes it difficult to evaluate the social risks of a technology that it is determined to deploy. Narrow AI—that is, machine learning involving a single task—has been deployed in the country for a variety of applications in a variety of contexts, but the government policy implies that the state is looking to expand its use from industrial and business applications and towards more public-facing tasks. As such, the risks of general AI in Kenya, particularly when spearheaded by the government, must be evaluated in comparison to other public deployments of technology.

Five key lessons can be taken from the Kenyan experience. First, deploying AI in highly fragmented societies risks deepening existing cleavages. The use of technology in elections in Kenya underscored the social risks of using technology to automate political and social processes in a highly fragmented society. During the 2017 digital election, the infrastructure around the election (3G and 4G networks) was unavailable and there were no alternatives, and the key state bureaucrat in charge of running the process was assassinated; the stakes can be high in highly fragmented societies, and rolling out technology without regard to the specific political context only exacerbates tensions.[3] Technology policy in Kenya reflects the political intentions of the state, and—as with the use of ICT in politics (the 2017 election), identity management (NIIMS), and other sectors — it is evident that without a sound understanding of the political and social context, there is a risk that AI will simply replicate and exacerbate the contours of exclusion and discrimination that already exist in the broader society.

Second, like many developing countries, Kenya is only now starting to develop legal frameworks to govern the use of technology. Large-scale deployments of AI in Kenya were conducted with oversight from the key medical and ethical oversight boards, but as noted in the government's own policy documents, the legal framework to actually guide when and how AI can be used does not exist. Much of the data collection for the medical studies cited in the task force's report was conducted before the introduction of the

Data Protection Act (2019) that governs the collection and use of citizens' data by both private and public entities. Without a legal framework to protect against the kinds of abuses seen in other settings, AI will continue to present the same threats in Kenya as it does elsewhere.

Third, the ethics of using AI in an industrial context versus a public-facing context are different. In an industrial or economic context where the outcome of the AI application does not interfere with the social, political, and economic rights of citizens and does not reduce citizens to data points, but is rather focussed on improving individuals' access to external facilities (for example, in agriculture), AI can and does improve processes overall. But where social and political rights are implicated—including the right to life (policing), freedom of expression (media), freedom of movement and association (surveillance), and so on—case after case has demonstrated that allowing room for human intervention in the interests of justice and fairness remains important. As such, more sophisticated conversations on the ethical dimensions of AI in developing countries is required before the technology is rolled out wholesale in countries like Kenya. This would involve significant investment in training a critical mass of analysts to properly and objectively evaluate the technology and its applications.

Fourth, the promise of the increased use of AI in Kenya is that it would introduce efficiencies in public administration. But past practice in the country affirms that this cannot be taken for granted. In fact, large-scale projects—including those that involve the use of technology (for example, the Konza Tech City[27])—are often large budgetary burdens with unclear time frames and metrics of success. The vague nature of the implementation plan for Kenya's AI and blockchain policy presents the risk that this will be another expensive initiative that will divert key and scarce state resources to projects that the state does not have the capacity to administer or fund. AI and blockchain are novel technologies that can effectively distract from a pattern and practice of the misallocation of public funds in large state-led projects.

Finally and specifically, AI in healthcare promises to introduce savings and increase access to critical medical information and technology in a resource-poor country. But it is worth noting that some of the technologies singled out in the task force's report are developed by university consortia that went on to establish private corporations to monetise their developments, even though the data that was provided to inform their studies were collected from Kenyan citizens free of charge. This speaks to a broader inequality of power

between the citizens of poor countries and private corporations that develop technologies, and a need to build equalisation policies and structures into the logic of projects and the deployments of AI. Concerns about privacy and the expropriation of citizen data are one layer, but a second layer involves the inability to provide truly informed consent to the collection and use of citizen data where the full dimensions of the technology have not been explained.

6 CONCLUSIONS

The Kenyan government's policy on AI and blockchain technology shows that it is eager to make these a central pillar of the country's technology policy. But with a mixed record on government-led involvement in technology, it is important to recall that technology is political, that is, it is intimately connected to power relations between various actors. Kenya's policymaking in ICT remains ambivalent, with major policy and infrastructure developments undermined by poor policy implementation and bureaucratic resistance. This ambivalence intensifies pre-existing structural inequalities and opportunities for violence. As such, any efforts to deploy new technologies in countries like Kenya must be accompanied by a wide-ranging and substantive political and human rights review that places the proposed policy in its rightful context.

Deploying AI in highly fragmented societies like Kenya risks deepening existing cleavages, including those around class and identity. Like many developing countries, Kenya is only now starting to develop legal frameworks to govern the use of technology, and the ethics of using AI in an industrial context versus a public-facing context are different. While what is promised is that an increase in the use of AI in Kenya will introduce efficiencies in public administration, past practice in the country affirms that this cannot be taken for granted. Where an AI application does not obstruct the social, political, and economic rights of citizens and where it

does not reduce the citizen to a data point but rather focusses on improving the access that individuals have to external facilities, AI can and does improve processes overall. But many cases have demonstrated that, when it comes to issues involving social and political rights, it is important to allow for human intervention in the interests of justice and fairness. As such, more rigorous conversations on the ethical dimensions of AI in developing countries are required before the technology is rolled out wholesale, and this includes significant investment in order to train a critical mass of people to properly and objectively evaluate the technology and its applications.

7 RECOMMENDATIONS

1. Conduct a deeper and more wide-ranging analysis of the political implications of existing and proposed applications of AI in Kenya, including comparisons with other countries where similar technology has been deployed.

2. Conduct a comprehensive review of ongoing implementations of AI in both private and public contexts in Kenya in order to identify existing legal and policy gaps.

3. Conduct deeper legal research into developing meaningful legislation to govern the development and deployment of AI technology in Kenya. In particular, a framework for the implementation of the Data Protection Act (2019) vis-à-vis AI and blockchain technology is urgently required.

4. Conduct training for local political actors and researchers on the risks and opportunities for AI to empower them to independently evaluate proposed interventions with due attention to the local context.

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ABOUT THE AUTHOR

Nanjala Nyabola is a writer and researcher based in Nairobi, Kenya. Her work focusses on the intersection between technology, media, and society. She has held numerous research associate positions including with the Centre for International Governance Innovation (CIGI), the Overseas Development Institute (ODI), the Oxford Internet Institute (OII), and other institutions, while also working as the lead researcher for several projects on human rights broadly and digital rights specifically around the world. She is a 2021 Stanford Digital Civil Society Fellow and a fellow at CIGI. She has published in several academic journals including the African Security Review and The Women's Studies Quarterly, and contributed to numerous edited collections. Nanjala also writes commentary for publications like The Nation, Al Jazeera, the Boston Review, and others. She is the author of *Digital Democracy, Analogue Politics: How the Internet Era is Transforming Politics in Kenya* (ZED Books, 2018) and *Travelling While Black: Essays Inspired by a Life on the Move* (Hurst, 2020).

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