
THE FUTURE OF AI GOVERNANCE – AFRICA AND THE GLOBAL LANDSCAPE

Submission to the High-Level Advisory Board on AI

30 September 2023

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1. INTRODUCTION

This paper examines fundamental challenges in governing artificial intelligence (AI); emerging trends in key jurisdictions (such as the European Union and the United States); and the state of AI governance in Africa. It concludes with recommendations on issues the UN’s High-Level Advisory Board on AI should consider in developing a global governance regime that benefits all states and ensures Africa is not left behind.

2. THE GLOBAL CHALLENGE

There are three reasons that governing AI poses a distinct challenge – the nature of the technology, the sociopolitical context in which it is being created, and the nature of its attendant risks.

The nature of the technology

Modern AI systems have three key components: the computing power necessary to train and run the system, the data used to train the system, and the model architecture and machine-learning algorithms that produce the system's behaviour.¹ In the present paradigm, scaling the amount of computing power and data available to train systems has led to exponential improvements in their performance. While it is not guaranteed that these exponential improvements will continue indefinitely, at present they show no sign of slowing down.

The rapid advances in AI models in recent years,² and particularly the existence of their "emergent capabilities" – where AI models demonstrate abilities which their creators neither foresaw nor explicitly encoded, such as appearing to reason or doing algebra – make the governance of AI a distinct challenge.³ It is difficult for technologists, let alone policymakers, to predict what cutting-edge AI systems will be capable of in the next two, five, or fifteen years. Even so, it seems likely that AI technologies will become increasingly capable across an increasingly wide range of domains.

A related challenge here is that at present, cutting-edge AI systems are "black boxes" – their creators are typically unable to explain why a given input produces an associated output.⁴ This makes demands that these systems be transparent and explainable not just a political challenge, but a technical one.

Sociopolitical context

AI governance is made more complex by the sociopolitical context in which AI is being developed. Two factors are particularly salient.

- **Asymmetric AI development:** The immense costs of training advanced AI models limits who can create them,⁵ with private companies in the US leading much of the development and Chinese AI labs in second place.⁶ The countries in which major AI labs reside have disproportionate influence, as these labs are bound first by national regulation. The AI labs themselves, which include some of the biggest technology firms in the world, also have significant sway as their emergent position often allows them to shape norms and regulatory approaches in the space, influencing the rest of the world.

¹ OpenAI, 'AI and Compute' (May 2018) (Accessible [here](#)). Note that machine learning algorithms and model architecture are technically distinct – while algorithms are statistical techniques used for performing certain tasks, 'architecture' in the context of neural networks is the arrangement of neurons and layers, and the connections between them – what the algorithms are 'run' on.

² Cotra 'Language models surprised us' Planned Obsolescence (29 August 2023). (Accessible [here](#).)

³ The Economist 'Huge 'foundation models' are turbo-charging AI progress' (11 June 2022). (Accessible [here](#).)

⁴ Xiang, 'Scientists Increasingly Can't Explain How AI Works' *Vice* (November 2022) (Accessible [here](#)).

⁵ Knight, 'OpenAI's CEO Says the Age of Giant AI Models Is Already Over' *Wired* (17 April 2023) (Accessible [here](#)).

⁶ Ding and Xiao, 'Recent Trends in China's Large Language Model Landscape' *Centre for the Governance of AI* (April 2023) (Accessible [here](#)).

- **Global power dynamics:** AI has clear military applications, from use in autonomous weaponry to advanced surveillance and intelligence operations. It also has the potential to enhance a state's control over its people, and its economic productivity more generally. Thus, some states may aim to advance these technologies as quickly as possible, and to prioritise their own national security objectives over collaborative, globally harmonised regulatory efforts.

AI risks

AI technologies can be used both to produce immense benefits (for example by advancing scientific research or increasing access to quality healthcare and education) and grave harms. With their current capabilities, AI systems can be used to generate disinformation, perpetuate prejudices, and violate copyright law. As capabilities scale, future systems could be used by malicious actors to create bioweapons, execute advanced cyber-attacks, and otherwise cause catastrophic harm.⁷

Some have argued this puts the risks posed by advanced AI systems in the same category as those posed by pandemics and nuclear war.⁸ And this is before one accounts for the possibility of an “artificial general intelligence”: an AI system that is as competent as humans at most economically valuable tasks.⁹ Such a system may not be aligned to human values, may be capable of deception, and may be able to act agentially (operating beyond human control) unless appropriately constrained.

These risks are compounded by the fact that many AI models are being released in an open-source fashion, allowing anyone in any region to access them. Even if 99,9% of people who use these models have no malicious intentions, the 0,01% of people who do could cause enormous harm.

3. EMERGING INTERNATIONAL TRENDS

AI governance is a nascent field. As of September 2023, no country has comprehensive AI legislation, and existing governance efforts largely take the form of international statements and declarations, national policy and strategy documents, and draft laws.

There is emerging consensus across the world on the key principles in AI governance. For example, the need for systems to be transparent and explainable, and to actively counter algorithmic discrimination, are referenced in policies, strategies, and draft laws emerging from the European Union, the United States, the United Kingdom, and China.¹⁰ Other cross-cutting themes include provisions on safety and security (particularly on the need to conduct both

⁷ Stacey and Milmo 'No 10 worried AI could be used to create advanced weapons that escape human control' *The Guardian* (25 September 2023) (Accessible [here](#).)

⁸ A list of scientists, academics, policymakers, industry professionals, and other notable figures who hold this view can be found [here](#).

⁹ For example, OpenAI's explicit [mission](#) is to 'ensure that artificial general intelligence benefits all of humanity'.

¹⁰ See the draft text of the European Union's '[AI Act](#)'; the United States' '[Blueprint for an AI Bill of Rights: Making Automated Systems Work for the American People](#)' (October 2022); the United Kingdom's policy paper '[A pro-innovation approach to AI regulation](#)' (August 2023); and the Cyberspace Administration of China's, '[Interim Measures for the Management of Generative Artificial Intelligence Services](#)' (July 2023).

internal and external audits of advanced AI systems); data privacy; and the need for human oversight and accountability.

However, there is substantial divergence in how these principles should be implemented – as if each region were using virtually the same ingredients to create different dishes. National and regional governance regimes are being built atop pre-existing regulatory cultures. Thus, the United States’ approach to date has been piecemeal, sector-specific, and distributed across federal agencies; while the European Union – through its draft AI Act – seeks to create comprehensive risk-based regulation that would require each member state to establish new national authorities to administer.¹¹

Given this divergence of approaches, and that the most appropriate governance regime will likely vary based on the local context of a given region, UN bodies can play an important role in fostering international collaboration and in clarifying how emerging principles should be interpreted.

4. AFRICAN AI GOVERNANCE

AI systems have already been deployed across Africa in sectors ranging from healthcare to financial services – particularly in Kenya, Ghana, Ethiopia, Nigeria, and South Africa.¹² These systems have largely been developed and deployed by private companies, with recent estimates suggesting over 2400 companies across the continent specialise in AI-related enterprises.¹³ National governments have also been involved in this proliferation; for example, Zimbabwe’s government has entered into major industrial partnerships with various China-based technology companies to develop a number of surveillance networks and identity systems that likely run on AI-driven technology, although the details of these projects remain murky.¹⁴

But as in more developed regions, regulatory responses to the use of AI in Africa have been partial and piecemeal. Our research found that only seven of Africa’s 55 countries have a national AI strategy, and no country has dedicated AI legislation.¹⁵ One exception is in data protection law: at least 31 of the 35 data protection laws enacted across Africa address AI to the extent that their provisions explicitly apply to the *automated* processing of people’s personal information, and in some cases provide the right not to be subject to a decision based on automated analysis of one’s personal information.

On the continental level, some progress has been made. For example, the Smart Africa Alliance, a multistakeholder initiative of various African governments, produced a ‘AI for Africa Blueprint’ in 2021 which provides actionable recommendations to assist states to implement national AI strategies.¹⁶ In 2021 the African Commission on Human and People’s Rights passed a resolution which acknowledged the risks that AI may pose to human rights, and which called for African

¹¹ Engler, ‘The EU and U.S. diverge on AI regulation: A transatlantic comparison and steps to alignment’, *Brookings Institute* (April 2023) (Accessible [here](#)).

¹² Ade-Ibijola and Okonkwo ‘Artificial Intelligence in Africa: Emerging Challenges’ in Eke and others (eds) *Responsible AI in Africa: Challenges and Opportunities* (2023). (Accessible [here](#).)

¹³ Ngila ‘Africa is joining the global AI revolution’ Quartz (23 June 2022). (Accessible [here](#).)

¹⁴ Munoriyarwa ‘The growth of military-driven surveillance in post-2000 Zimbabwe’ Media Policy and Democracy Project (2021). (Accessible [here](#).)

¹⁵ ALT Advisory *AI Governance in Africa* (September 2022). (Accessible [here](#).)

¹⁶ Smart Africa ‘Blueprint: Artificial Intelligence for Africa’ (2021). (Accessible [here](#).)

states to develop a comprehensive governance framework for AI and other emerging technologies.¹⁷ But overall, while rhetoric abounds on the economic benefits of these technologies for the continent, relatively little has been done to translate this into concrete policy.

The core geopolitical challenge identified above – that the development of advanced systems is driven by private companies in the Global North and in China, making public governance of these technologies incredibly challenging without clear routes for participation – is particularly acute in Africa.

5. RECOMMENDATIONS FOR THE HIGH-LEVEL ADVISORY BOARD ON AI

Global guidance from international bodies such as the UN is necessary to ensure that all states can benefit from the boons offered by increasingly advanced AI systems, while constraining these technologies' risks. Acknowledging the complexity of this topic, we invite the High-Level Advisory Board to consider the following points in its work:

- **Focus on foundation models:** The Advisory Board ought to focus not on what today's AI systems can do, but on what these systems are likely to be able to do within the next five to ten years.
- **Focus on human rights:** UN bodies can play an invaluable role in clarifying the human-rights implications of advanced AI systems, connecting novel risks to well-established philosophical and legal frameworks.
- **Mechanisms for participation in the development of advanced systems:** Considerable thought needs to be given to involving governments and civil society the world over in the development of advanced systems. This is particularly challenging as these systems are primarily being developed by private companies. But given that many of these companies have expressed willingness both to be regulated and to foster democratic participation in the design of their systems, creative solutions surely exist.¹⁸ This issue is central to ensuring that the African continent, and the Global South more broadly, are not left to be passive recipients of technological advancements.
- **Creation of an international institution to govern AI:** Another central question is whether an international institution to govern AI ought to be created. A recent paper, "International AI Institutions: A Literature Review of Models, Examples, and Proposals", offers guidance on this issue.¹⁹
- **Clarity on "transparency and explainability" principles:** Transparency in the context of AI is as much a technical challenge as a policy one. Guidance should be given on the appropriate threshold for transparency in a given system, and on the consequences for a

¹⁷ African Commission on Human and Peoples Rights, Resolution 473 on the need to undertake a study on human and peoples' rights and artificial intelligence (AI), robotics and other new and emerging technologies in Africa (2021). (Accessible [here](#).)

¹⁸ See Zaremba and others 'Democratic inputs to AI' OpenAI (25 May 2023). (Accessible [here](#).)

¹⁹ Maas and Villalobos 'International AI Institutions: A Literature Review of Models, Examples, and Proposals' *AI Foundations Report 1* (22 September 2023). (Accessible [here](#).)

system if its developers do not meet that threshold. Best practices should also be considered on how public institutions and regulatory bodies can get insights on the operation of advanced AI systems, so they can conduct proper oversight.

- **Clarity on liability:** Guidance on who ought to be liable in the use of an advanced AI system would be invaluable in fleshing out the requirements for oversight and accountability in relation to AI governance.
- **Open sourcing:** Open sourcing poses unique challenges, as open-source technology can circumvent restrictions that may be imposed when a technology is centrally controlled. Guidance on how companies, states, and individuals should approach this challenge would therefore be welcomed.
- **Auditing models:** It is widely agreed that advanced AI models should be subject to independent audits both in development and after they are deployed.²⁰ Guidance ought to be provided on best practices in auditing, detailing for example what constitutes independence, who is qualified to conduct such audits, and so on.
- **Compute governance:** Given that significant computing power is necessary to run advanced AI systems, the Advisory Board could consider the possibility of tracking the distribution of computing power globally, as how nuclear weapons are tracked.
- **Licensing regimes:** The Advisory Board should consider whether private companies ought to attain a license certifying that certain ethical and safety standards have been met before companies can deploy their systems; and if so, who ought to have the authority to grant such licenses.

ENDS

²⁰ See Mislove 'Red-Teaming Large Language Models to Identify Novel AI Risks' White House Office of Science and Technology Policy (29 August 2023). (Accessible [here](#).)