Can artificial intelligence help to achieve inclusivity?

Artificial intelligence can play a role in finding solutions to many of Africa's development challenges, but it requires a sensitivity to context, not to mention a healthy scepticism towards the idea of technology as objective or unaffected by the positionality of those designing the AI algorithms.

For the African scientific community, AI cannot be ignored. At the same time, it's a double-edged sword – offering enormous potential to help facilitate sustainable socio-economic development, but at the same time running the perpetual risk of further deepening economic inequalities, and reproducing gender stereotypes and discriminatory social norms.

There is also some concern that Africa may not be ready for AI and that focusing on it will inevitably detract from more important developmental priorities.

Acknowledging the complexity of the issue, a September feminar, facilitated by Gender at Work as part of its Gender Action Learning process for the HSRC Gender & Inclusivity Project aimed at advancing gender and inclusivity within science granting councils in Sub-Saharan Africa, asked a pertinent question:

What will it take for science granting councils to support artificial intelligence research and development in Africa that serves and represents the needs, interests and perspectives of the continent's diverse inhabitants?

Participants probed key assumptions underlying the work of science councils in Africa as it relates to AI. They explored what it means to integrate gender and inclusivity in the AI sector and how SCGs have engaged with AI as part of their practice and culture.

An earlier feminar held in July, which emphasised the need for *engaged* scholarship that recognises the importance of context, had given participants a chance to think about different ways of knowing, providing a useful foundation for discussions about AI and how it can help science granting councils and practitioners to deepen their commitments to gender and inclusivity.

Rethinking the tradition-modernity dichotomy

Situating the discussion in an African context, Dr Olga Bialostocka, senior research specialist at AISA-HSRC, referenced the work of Kwame Gyekye, a leading figure in the development of modern African philosophy, to suggest alternatives to the dichotomy between tradition and modernity imposed by mainstream Western thought which tends to position African tradition as an obstacle to development.

"As a result, many African states attempt to modernise their cultures by eliminating what are deemed backward practices so Kwame Gyekye, a Ghanaian philosopher,

proposed a way forward, claiming that a self-created modernity, forged and refined in the fairness of conversations between African intellectual creativity and Africa's complex cultural heritage, needs to draw on African experiences and appropriate rather than transfer or transplant technology," she said.

This type of appropriation is in fact already taking place, as a pre-recorded interview between Gender at Work senior associate Michal Friedman and Mitchel Ondili, a researcher based at the Centre for Intellectual Property and Information Technology Law (CIPIT) at Strathmore University in Kenya, aptly illustrated.

The evidence-based research and training centre, which started with a sole focus on intellectual property, has transformed over the years to incorporate ICT and has become a much wider learning platform for students, researchers and the wider community.

A new narrative

Asked by Friedman how the centre's work on AI stands in relation to the developmental issues faced by the continent, Ondili suggested there was a need to "change the narrative" which currently underpins the idea that there's a "hierarchy of challenges" and Africa does not deserve an AI solution to some of those challenges.

"I think there's a need to change that narrative a little bit. [We need to] see how AI applies, see how it helps … Even in … dealing with the pandemic, there were lot of ways that we needed to rely on technological solutions. If the whole time we had been saying, 'You know, we can't; we need to sort out other problems first', it would have been a much, much worse situation. So we're trying to fill a gap, but also build a resource," she said.

Ondile said a central aim of CIPIT is to grow African research, capitalising on the unique perspectives to be found on the continent. She challenged the notion that Africa was only able to "transplant" technologies from the Global North without being in control of the trajectory of its own AI.

"When it comes to development we have unique problems … unique situations. They don't grow in the same kind of data-rich environment you find in the Global North, but they are still just as valid. And a lot of the solutions we get from the North are not effective, not applicable to context. And AI for development is really a way for us to say: What is the philosophy of AI in Africa? How do you grow this technology in relation to the problems that we have? How do you make sure it's not just a form of solutionism?

Ondile emphasised the need to "grow the experience and the wealth of people here" in Africa, describing Africans as "untapped resources" with a "wealth of untapped knowledge".

She said technology had a range of applications over a wide range of fields including medicine, agriculture and education.

The focus on legal research at CIPIT also means a focus on justice in the AI space.

The myth of objectivity

"There are issues of bias," she said. "How do you, for example, make an algorithm accountable? How do you make the makers of an algorithm accountable? How do you explain it to others? How do you explain it to the people who are affected? What are their rights? What are their responsibilities?"

In relation to gender-based research the issue of bias also becomes relevant. Ondile said it was necessary to understand that technology, while appearing to be objective, reflects the positionality of the people designing and deploying the algorithms for AI technologies – people who happen to be mainly men.

"I remember when I was first learning about this, I came across a book that highlighted the fact that the reason why the first artificial intelligence models only did two things – maths or play chess – was because these were mainly the pastimes of men."

Ondile said there was a need to acknowledge the implications of our gendered history on machine learning models that are "often touted as objective, when they are truly not".

"So inclusivity for us … it's not just that its part and parcel of the work we do. But you can't really do good work without it, and you can't really do honest work without it."

She said a CIPIT project aimed at developing a database that would track gender parity in AI companies across Africa raised the complexity of denoting gender parity. "And so, when we talked about it, we said, it's not just about the representation in terms of male and female. We're also talking about where are women in management roles? Where are they across the chain? Who is being included? Who is not being included?

"So most of that is … a kind of an unfurling of the complexity. But I think each time that you peel back another layer, you also reveal more about how you truly approach research and the things that you take for granted when you begin working with the process."

Ondile suggested that narrow approaches to the development of AI could potentially forgo an appreciation of important social, political and economic notions that are embedded into algorithmic codes that merely reproduce societal assumptions under the guise of objectivity.

Balancing multiple interests

Asked about the approach taken by CIPIT, she said: "And so when it came to our own practice, projects and team, we have to be extremely humble about our positionality. We have to understand that we are always approaching everything that we're doing from a perspective. The more perspectives that we can gain the better. And even then we have to acknowledge that any outcome that we have is really only ever partially accurate or complete in nature," she said.

She admitted that while there was sometimes a need to balance different interests, at the end of the day, people's lives were being impacted.

"To get everybody on board sometimes one tends to soften some of the parts that I think should be hit much harder, but at the end of the day we're also not just talking about abstract concepts of algorithms and regulation … These are things that affect people in their daily lives."

She said figuring out a middle ground, what was positive for the organisation was "always a work in progress … you acknowledge your responsibility, and you try to fulfil it the best that you can."

In the discussion that followed, the need for some awareness about the historical development of AI, a context-responsive approach to its development and a sensitivity to the likelihood of bias in AI development continued to emerge as key themes in what is clearly an ongoing conversation about the way in which AI can be used to deepen commitments to gender and inclusivity.

By

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