Amidst a global pandemic, who is AI for?

Global artificial intelligence capability is expanding fast, as is the threat of emergent infectious diseases. However, AI is not always used for the benefit of the people. Track-and-trace apps have produced serious concerns and implications for democracy and transparency during national emergencies, and their rolling out has often failed to protect those most at risk of contracting COVID-19. **Stephen Roberts, Audrey Prost,** *and* **Lele Rangaka** *find a significant variance in how different populations and communities either benefit from, or are oppressed and disenfranchised by, AI operations aimed at containing COVID-19. The authors argue that for AI to address these inequalities, it must focus on three factors outside of technology: people, processes, and politics.*

As the COVID-19 pandemic enters its second year, little doubt remains regarding the unprecedented and transformative role which practices of artificial intelligence (AI) are now positioned to play within ongoing efforts to combat the spread of SARS-CoV-2 across populations.

This crisis has become a 'prism and amplifier for anything data'. The intensifying capture and use of data throughout the pandemic has included the unleashing of drone technology to enforce public health quarantines, the rise of the COVID-19 robot, and the unfurling of pervasive security cameras across cities empowered with facial recognition technologies. Some of these new forms of data capture have generated widespread unease, as exemplified by ongoing public debates over digital contact tracing strategies in the UK and abroad, and citizen outcries over the involvement of big tech in public health responses.

In contrast, throughout stages of this pandemic, further applications of AI to understand and shape responses to the spread of COVID-19 have been met with great interest and enthusiasm. Recent innovations and advancements in AI, it has been argued, have enabled state and non-state actors to process, analyse, and understand large datasets within and across populations to inform critical areas of responses to the pandemic, including screening, prediction, forecasting and contact tracing. Yet, while AI-driven responses to COVID-19 have now flourished in many countries across the globe, this pandemic has also served as a powerful illustration of ongoing digital divides, and in the unequal degrees of access which citizens, not only residing in low-income states, but also high-income ones, have to internet and smartphone usage.

Despite the celebrated and often controversial claims about what AI 'can do' in the contexts of COVID-19, it is undeniable that emerging AI responses to this public health emergency have also separated communities and populations from past experiences of responses to disease outbreaks and acute health episodes, and have further distorted future possibilities of how responses towards emergent epidemics and pandemics might be shaped and conceptualised in responses to future disease outbreaks and public health emergencies.

To this end, and as discussed in a recent UCL roundtable on AI and emerging epidemics, never has the need for a sustained examination and interdisciplinary critique of the place of AI in responding to adverse health events been more timely and critical.

In a world of advancing AI capacities and expanding emergent infectious disease threats, **how can AI be leveraged for the benefit of the people**?

Our response? Never forget the **3Ps**: people, processes, and politics.

People-centred thinking must be paramount in ongoing assessments of the role of AI practices in responding to outbreaks during and after COVID-19. This calls for a robust intersectional and interdisciplinary analysis of how different groups of people experience and are empowered or disenfranchised by the employment of AI-driven responses during national emergencies. While governments around the world have sought to present AI-supported contact-tracing apps as instrumental to exiting imposed national lockdowns, evidence increasingly suggests that the global proliferation of these 'track-and-trace' apps ushered forward by big tech have produced serious concerns and implications within certain contexts for democracy and transparency during national emergencies, while research elsewhere has demonstrated how the rolling out of these apps has often failed to protect those most at risk of contracting, spreading, and dying of COVID-19.

In 2020, a year which saw global resistance against systemic racist violence and structural inequities, critical public health research has also drawn attention to the ways in which the increased insertion of AI practices into COVID-19 responses has provided new opportunities for the intensification of algorithmic oppression and discriminatory design against already marginalised or racialised communities. Equally important discussions have also emerged on the inclusion or exclusion of social determinants of health indicators for modelling the spread and impacts of COVID-19, and how such assumptions used in modelling techniques might potentially deepen health inequities among already vulnerable populations including racialized and Indigenous populations, as well as economically disadvantaged groups.

These examples bring into critical focus the significant variance in how different populations and communities either benefit from, or are oppressed and disenfranchised by, advancing AI operations launched in efforts to contain COVID-19 and to 'police the pandemic'. Beyond a narrow focus on technical solutionism in leveraging AI to reduce infection rates and increase clinical diagnostic precision, work that considers AI for the people must recognise the everyday complexity in the lived experiences of individuals and communities, intermeshed within racial, economic, social, historical, and political injustices and within relationships to infection, containment, and contagion.

A people-centred vision that addresses the challenges of intensifying AI practices in pandemic response must also consider the central role of communities and government in addressing and understanding drivers of vulnerability and ill health during and beyond outbreaks, and in continually reviewing parameters against the encroachment and unintended impacts of AI-supported public health interventions.

Understanding and evaluating **processes** also matters greatly in considering how evolving systems of AI in public and global health can be leveraged for the benefit of the people. While advancing practices of AI are infamously associated with complexity and opacity, it is also vital to remember the human face behind processes of AI knowledge production. Already, important conversations are deepening on recruiting more diverse, interdisciplinary AI talent in the forms of programmers, engineers, and analysts to address bias and to build principles of diversity, representation and lived human experiences into the development culture of AI. We are also witnessing a new found value for interdisciplinary queries on approaches to AI, with calls for increased social science investigations on systems design, errors and oversights not only flourishing outside and in reference to the system, but also from **within.**

For global health systems important interdisciplinary evaluations of the processes which constitute AI operations, and their impacts must be foundational in navigating incidences where AI-supported or assisted interventions might have observable benefits for global health communities. These evaluations should consider the actors involved in AI development processes, the values, and worldviews which such actors promote, and how proposed initiatives might advance or undermine global health's commitments to social justice and equity.

Lastly, it is critical to consider the importance of **politics** in ongoing efforts to leverage AI for the benefits of the people, for social justice and for global health equity. While COVID-19 is one of the most severe health crises in decades, it is also an opportunity and diagnostic for understanding and evaluating the ongoing crisis of international politics. Political decisions have driven responses to the spread of COVID-19 with varying degrees of success, and the increasing application of AI-responses cannot be divorced from the political contexts and visions in which such responses have originated.

There is a striking contrast between the [UK's mounting failures](#) to effectively and transparently harness AI-capacities in its pandemic response operations, and the ways in which other states, including [Taiwan](#), which has operated effective [AI-powered participatory surveillance methods](#) within an integrated response system emphasizing free and early testing, extensive and effective social care, paired with high levels of trust in government authorities. An understanding of politics, as it intersects and interweaves into public health operations will therefore be essential in any comparative cross-country learning exercise and sharing of best practices which seeks to understand the effectiveness of varying national responses to this pandemic and to future adverse global health episodes.

In navigating future assessments of the impacts of new AI-powered responses to emerging outbreaks, political engagement will be further essential in providing context for how different political and governance structures may enlist digital interventions for varying objectives and ends which may run counter to public health goals and health equity, [especially during epidemics and pandemics](#). Engaging with politics will also help understand and chart how critical elements of trust, compliance, and resistance within populations may shape the outcome, uptake, and effectiveness of these advancing digital practices during health emergencies.

Seen collectively then, an emergent and interdisciplinary agenda of research and action which incorporates, understands, evaluates, and centralises the **3 Ps** – **people**, **processes**, and **politics** – all too often obfuscated within overly technical contemporary discussions of AI, is not only salient and timely, but also practical, and ultimately, humane.

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Notes:

- *This blog post is based on ongoing discussions from UCL's AI & Policy Roundtables, which bring together leading voices in policy, industry, third sector and academia to stimulate dialogue and forge consensus on how to deliver "AI for people and planet".*
- *The post expresses the views of its author(s), not the position of LSE Business Review or the London School of Economics.*
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