GLOBAL INFORMATION SOCIETY WATCH 2019

Artificial intelligence:
Human rights, social justice and development

Association for Progressive Communications (APC),
Article 19, and Swedish International Development Cooperation Agency (Sida)

Global Information Society Watch

2019

Global Information Society Watch 2019
Artificial intelligence: Human rights, social justice and development

Operational team
Valeria Betancourt (APC)
Alan Finlay (APC)
Mallory Knodel (ARTICLE 19)
Vidushi Marda (ARTICLE 19)
Maja Romano (APC)

Project coordination team
Valeria Betancourt (APC)
Cathy Chen (APC)
Flavia Fascendini (APC)
Alan Finlay (APC)
Mallory Knodel (ARTICLE 19)
Vidushi Marda (ARTICLE 19)
Leila Nachawati (APC)
Lori Nordstrom (APC)
Maja Romano (APC)

GISWatch 2019 advisory committee
Namita Aavriti (APC)
Rasha Abdul Rahim (Amnesty International)
Alex Comninos (Research ICT Africa)
Malavika Jayaram (Digital Asia Hub)
J. Carlos Lara (Derechos Digitales - América Latina)
Joy Liddicoat (Centre for Law and Emerging Technologies, University of Otago)
Andrew Lowenthal (EngageMedia)
Micaela Mantegna (Geekylegal/Machine Intelligence Lab, Center for Technology and Society, San Andres University)
Valeria Milanes (Asociación por los Derechos Civiles)

Project coordinator
Maja Romano (APC)

Editor
Alan Finlay (APC)

Assistant editor and proofreading
Lori Nordstrom (APC)

Publication production support
Cathy Chen (APC)

Graphic design
Monocromo

Cover illustration
Matías Bervejillo

We would like to extend a special note of thanks to a number of authors who have made ad honorem contributions to this edition of GISWatch.
We gratefully acknowledge the following:

Philip Dawson and Grace Abuhamad (Element AI)
Anita Gurumurthy and Nandini Chami (IT for Change)
Rasha Abdul Rahim (Amnesty International)

APC would like to thank the Swedish International Development Cooperation Agency (Sida) and ARTICLE 19
for their support for Global Information Society Watch 2019.

Published by APC
2019
Printed in USA

Global Information Society Watch 2019 web and e-book
ISBN 978-92-95113-13-8
APC Serial: APC-201910-CIPP-R-EN-DIGITAL-302

Automating informality: On AI and labour in the global South

Noopur Raval[1]

Introduction

Since the publication of Frey and Osborne's important paper in 2013,[2] announcing that approximately 47% of existing jobs in the United States (US) were susceptible to automation, the "future of work" with a focus on questions of employment has become a core research concern among research and policy organisations worldwide. Subsequently, more such regional trend studies[3] have highlighted the impact of automation on employment in different parts of the world, especially in the global North. Various kinds of artificial intelligence (AI)-enabled technologies are already transforming global logistics and supply chains as well as other job domains such as accounting, business processing and others – areas that until now heavily relied upon multiple human agents at each step.

Automated processes, as well as the creation of dynamic, on-demand labour pools in real time, have begun to replace permanent and long-term contract jobs in the global North, leading to serious concerns and considerations about increased precarity (the lack of job security), informalisation, wage theft, granular surveillance and exploitation of human workers in platformised work. Moreover, many developed economies are also facing an ageing workforce,[4] raising concerns with respect to reskilling and care for the elderly once this workforce retires. However, a majority of countries in the global South are witnessing a "youth bulge", where, for instance, the median age of the entire African continent is 19.4 years (2019). India, where this essay's empirical focus lies, is alone home to 600 million young people (between ages 15 and 24).[5] Questions of skilling the youth, combating increasing unemployment and increasing women's participation in work remain big political challenges in developing economies.

Most importantly, the endurance and dominance of informal work remains the biggest distinguishing factor of global South labour markets. While there is no one clear definition for informal work, it includes atypical, non-standard, self-generated and home-based work that is unregistered (or too small to be registered) and is not adequately regulated and/or taxed, often because of the lack of a clear employee-employer relationship.[6] As per a 2018 International Labour Organization (ILO) report, more than 60% of the world's employment happens in the informal economy.[7] While the estimates vary, the informal economy in India still accounts for more than 80% of non-agricultural employment. Widespread informality in labour also makes it hard to enforce minimum wage or decent work standards.

In this sense, the combination of work precarity as the norm as well as the social and cultural constraints on people's abilities to find work demand a *human-centric* orientation to the questions of AI and labour in the global South. In line with this, some existing conversations are already adopting a developmental lens to think about how AI may be harnessed to democratise education, for training and skills development, to provide better health care and to help people find jobs, among other things.

Before moving forward, two points are worth clarifying. First, it is useful to understand that since "artificial intelligence" as a blanket term could refer to varying levels and kinds of big data and algorithmic innovations, in this report I focus specifically on algorithmic platforms as they reshape contemporary work arrangements.

1 Noopur Raval is a PhD candidate in the Informatics department at the University of California Irvine.

2 Frey, C. B., & Osborne, M. (2013). *The Future of Employment: How susceptible are jobs to computerisation?* Oxford Martin School. https://www.oxfordmartin.ox.ac.uk/publications/the-future-of-employment

3 Manyika, J., et al. (2017). *Jobs lost, jobs gained: Workforce transitions in a time of automation*. McKinsey Global Institute.

4 Christensen, K., et al. (2009). Ageing populations: the challenges ahead. *The Lancet, 374*(9696), 1196-1208.

5 Betigeri, A. (2018, 18 July). India's demographic timebomb. *The Interpreter*. https://www.lowyinstitute.org/the-interpreter/indias-demographic-timebomb

6 Hussmanns, R. (2005). *Defining and measuring informal employment*. International Labour Office. https://www.ilo.org/public/english/bureau/stat/download/papers/meas.pdf

7 International Labour Organization. (2018). *Women and men in the informal economy: A statistical picture*. Third edition. https://www.ilo.org/global/publications/books/WCMS_626831/lang--en/index.htm

The second is that, at least for the near future, especially in the global South but also elsewhere, what we are witnessing is not total and complete automation of/in work but rather what has been called "heteromation"[8] (or a reorganisation in the division of labour between humans and machines). This is also a crucial point as it helps us to "keep humans in the loop" (while building AI) and recentre human work *alongside* machine intelligence. Such a shift also means that we are not necessarily talking about "machines replacing humans" but rather displacing traditional work roles and thus calling for a re-imagination of human work.[9]

This report, then, offers vignettes from the ongoing platformisation and increasing algorithmic management of work in India to give a glimpse of such "heteromated futures" in the global South. With every example, the report also illustrates the socio-technical effects of AI implementation in work, with a focus on prevalent informality and vulnerability as well as social hierarchies of caste, gender and class in India.

Platformisation of blue-collar work

Not surprisingly, a lot of AI-powered productivity technology is marketed to white-collar workers with the promise of "automating banality away", allowing creative and cognitive workers to focus on *real* productivity (versus administrative and repetitive tasks). On the other hand, in blue-collar service and logistics jobs, algorithmic management as well as the use of natural language processing (NLP),[10] facial recognition and biometric attendance have seen a sharp uptake, promising speed, efficiency and standardisation in processes. In India the most prominent examples of algorithmic platforms managing pools of workers in real-time are service intermediaries such as Uber, Olacabs, Swiggy and Zomato (food-delivery platforms), and e-commerce platforms such as Amazon and Walmart-owned Flipkart. Various reports of platform workers in the global South have shown how minutely workers are monitored for work and rest time, how attendance and presence at work is monitored through workers having to take selfies, and how recruitment of new workers happens en masse through artificial conversational agents.

It is worth noting that it is not a coincidence that such technologies are being both deployed on and refined through their use on informal and contract workers, given the overall lack of transparency and monitoring of work conditions among these groups. Further, more work needs to be done to study informal and semi-formal workers' understanding of their rights while their workplaces and processes get increasingly datafied. While in-depth commentary is beyond the scope of this report, the datafication of already vulnerable worker/citizen subjects produces a kind of "double marginalisation",[11] similar to what scholars have been discussing with regard to the datafication of refugees and asylum seekers.

Reintermediation via algorithms at work

As several studies have now shown,[12] app-based ride-hailing drivers are among the largest group of workers currently being algorithmically managed on a granular basis. In India, the intervention and creation of a new "pop-up"[13] labour market due to the arrival of app-based work has resulted in the loosening of traditional local and regional labour markets. Historically, participation in certain occupations (such as cleaning, driving, domestic work, beauty work, etc.) has tightly mapped along the lines of gender, caste, religion and language.[14] Based on the complex hierarchical caste system, only certain caste communities were allowed to teach, trade, farm and so on, while certain caste communities were forced to carry on in a single, stigmatised occupation (such as manual scavenging or sewage cleaning). In pre-algorithmic times, migrating to urban centres to engage in non-agricultural labour required connections, social networks, as well as proofs of belonging (domicile certificates,

8 Ekbia, H., & Nardi, B. (2014). Heteromation and its (dis)contents: The invisible division of labor between humans and machines. *First Monday, 19*(6). https://journals.uic.edu/ojs/index.php/fm/article/view/5331

9 For a longer discussion on how machines are not replacing but displacing and reconfiguring human-work, see: https://quote.ucsd.edu/lirani/white-house-nyu-ainow-summit-talk-the-labor-that-makes-ai-magic

10 NewsVoir. (2018, 18 August). Vahan announces its AI-driven assistant on WhatsApp to automate recruitment. *Deccan Chronicle*. https://www.deccanchronicle.com/business/companies/180818/vahan-announces-its-ai-driven-assistant-on-whatsapp-to-automate-recrui.html

11 I draw on Dalit feminist writer Bama's articulation of the "double marginalization" of Dalit women under the power of caste and patriarchy here. For a detailed discussion see: Singh, R. (2013). Dalit Women Identity in Bama's Sangati. *The Criterion: An International Journal in English, 4*(V). www.the-criterion.com/V4/n5/Ranjana.pdf

12 Surie, A., & Koduganti, J. (2016). The Emerging Nature of Work in Platform Economy Companies in Bengaluru, India: The Case of Uber and Ola Cab Drivers. *E-Journal of International and Comparative Labour Studies, 5*(3). ejcls.adapt.it/index.php/ejcls_adapt/article/view/224

13 "Pop-up" here refers to how algorithmic, big-data platforms like Uber, Ola and others are able to aggregate and show real-time demand and supply within an area, creating lucrative temporary markets in different locations. These markets are not permanent given that – based on the time of the day or special events – some areas have high demands only at certain times (weekends, night, concerts, etc.).

14 Raval, N., & Pal, J. (2019). Making a "Pro": 'professionalism' after platforms in beauty-work. *Proc.ACM Hum.-Comput. Interact., 3*, CSCW, Article 175. https://doi.org/10.1145/3359277

references) to be able to find work in the city.[15] This made it difficult even for migrating workers to cross the social and cultural barriers imposed on employment. Locally, in city-based markets, algorithmic platforms have afforded a way for unskilled and skilled migrant workers to circumvent traditional gatekeeping and at least find temporary work. Mark Graham and colleagues made similar observations about "gig economy"[16] work in the sub-Saharan region, demonstrating how algorithmic platforms are not disintermediating work ("taking humans out"), but rather *reintermediating* work.

AI, temporary labour and social hierarchies

In another study, with app-based female beauty and wellness workers in India who were also migrating from salons and smaller, informal parlour set-ups to doing app-based on-demand beauty work, we discovered how working through app-based platforms allowed women greater flexibility at work.[17] In the AI and work debate, flexibility has been a contested notion.[18] Since the rise of various forms of flexi-work (freelancing through sites like Upwork, micro-tasking through Mechanical Turk and then gig work through Uber, Deliveroo, UberEats, Zomato, etc.), Western scholars have consistently argued that the notion of "flexibility" glosses over the hidden costs[19] and rules of so-called "anytime, anywhere" work. While platform companies claim that dynamic algorithmic matching creates a convenient digital workforce, that is "ready to go, anytime you need work done," it also creates a perpetual "reserve army" of workers who can never log off. Many reports from across the globe have revealed how platform workers end up working long hours in order to make a decent living. In this sense, flexibility at work comes with a heavy price.

Nevertheless, this is not so straightforward when we look at platformised work in the global South. For the women (and men) working through apps, the temporal flexibility to choose or refuse work at certain hours meant that they could attend to social obligations and family needs and build a future of work where formal career pathways are absent.

Often, when asked why workers were choosing to continue working through app-based platforms *despite* seeing and knowing the opacity of algorithmic management, dynamic price determination and the skewed effects of platform rating mechanisms on their ability to work, many workers across platforms reiterated that this was "not permanent work."[20] People were participating for their own reasons – to pay off a loan, to own a vehicle, to set up their own business, to get part-time education and so on. Some also evidenced how working through and with smartphone-based apps was much *cleaner* and more *dignified* than previous work they had done (such as cleaning trucks, manual labour or the same kind of work without tech mediation). Given the long history of technological participation and modernity in various post-colonies of the global South, as well as the role that technologies have been projected to play in developmentalism (from STEM[21] education to cheap laptops to mobile-first internet access), working with technology and technologised work are seen as upward social mobility. In this sense, when we consider the present and near future of AI and labour in India at least, participating in algorithmic work not only appears (to workers) as relatively good temporary work, but often also more dignified work.

AI, surveillance and labour

In the context of AI deployment and the reshaping of work in the global South with a focus on the informality of work, multiple strands emerge regarding surveillance. Continuing with platform work examples, both in service and other e-commerce platforms, the deployment of granular surveillance to track worker movement, worker and customer communications, rest times, and even worker activity while not logged onto company apps is commonplace. Surveillance technologies in the workplace and the resultant metrics have often had dire consequences, such as the reshaping of worker privacy rights or increased performance

15 Surie, A., & Sharma, L. V. (2019). Climate change, Agrarian distress, and the role of digital labour markets: evidence from Bengaluru, Karnataka. *DECISION*, *46*(2), 127-138; Lalvani, S. (2019, 4 July). Workers' fictive kinship relations in Mumbai app-based food delivery. *CASTAC Blog*. blog.castac.org/2019/07/workers-fictive-kinship-relations-in-mumbai-app-based-food-delivery

16 Graham, M., Hjorth, I., & Lehdonvirta, V. (2017). Digital labour and development: impacts of global digital labour platforms and the gig economy on worker livelihoods. *Transfer*, *23*(2), 135-162. https://www.researchgate.net/publication/315321461_Digital_labour_and_development_impacts_of_global_digital_labour_platforms_and_the_gig_economy_on_worker_livelihoods

17 Raval, N., & Pal, J. (2019). Op. cit.

18 Kenney, M., & Zysman, J. (2016). The Rise of the Platform Economy. *Issues in Science and Technology, 32*(3). https://issues.org/the-rise-of-the-platform-economy

19 Lehdonvirta, V. (2018). Flexibility in the gig economy: managing time on three online piecework platforms. *New Technology, Work and Employment,* 33(1), 13-29; De Stefano, V. (2015). The rise of the "just-in-time workforce": On-demand work, crowdwork, and labor protection in the gig-economy. *Comparative Labor Law & Policy Journal, 37*(3), 471-504.

20 Rosenblat, A. (2016, 17 November). What Motivates Gig Economy Workers. *Harvard Business Review*. https://www.hbr.org/2016/11/what-motivates-gig-economy-workers

21 Science, technology, engineering and mathematics.

stress among workers and the concomitant duress on the right to enjoy and be fulfilled by work.

Moreover, surveillance and worker management also have implications with respect to the public "visibility" of a work force when it comes to managing a brand image and the profitability of platform and e-commerce companies. Simply put, the socio-demographics of individual workers can be "better" managed to suit the biases of paying customers. In India, not only have certain castes and tribes, or religious and gendered communities, been confined to specific occupational roles and hence always been viewed and managed suspiciously as "risky subjects", but now, as venture capital-backed platforms seek to pander to the affording middle-class consumers, collecting worker biometric data, tracking their minute-by-minute activity and their location, are seen as desirable for "brand management". So while informal platform work might create a sense of more dignified work for workers, it is worth keeping in mind that the imagined consumers/users of such platforms remain those who can afford to pay for just-in-time services (upper middle-class, upwardly mobile professionals in most cases). In this sense, the social relationships that are found in traditional informal work are not necessarily challenged or reversed in the informal economy produced by platformisation.

This "socio-technicality" is important as it speaks to the unique encounter between informality (a characteristic feature of many developing economies) and algorithmic technologies wherein the "biases" integral to structural arrangements of work are carried over to platform work.

Another strand of AI, work and surveillance in the global South relates to the "hidden ghost work"[22] of data cleaning, image labelling, text processing and content moderation being performed by back-end workers across developing economies. This new phase of back-end work follows the last IT/ITES[23] boom in the early 2000s that became globally visible through the figure of Indian call centre workers. Recently, much has been written about the wage differentials in digital labour and the evidently meagre remuneration being paid to surveilled global South workers doing the "janitorial" labour that keeps digital platforms healthy and productive.[24] Not only this, it has also come to light that many AI assistants are in fact fully powered by real human agents working in developing countries.

Some of this work is done without a clear understanding of the application of the labour, distancing the labourer from the product output. For example, as a part of large, global data-processing chains, many women and men preparing the training data for cutting-edge AI applications under close surveillance may be unwittingly embedded in assembling various policing and surveillance technologies themselves.

Conclusion: Protection for the doubly precarious

As this report has tried to show through different real-world examples, in global South markets such as India where informality is rampant, the combination of financial and socio-cultural precarity as well as the desire to stay *within* the market through technological participation make platform work an attractive option. By offering informality as the dominant metaphor, this report aims to open up space between totalising critiques of AI in the workplace as resulting in bad, exploitative work on the one hand, and AI-embedded futures as automatically empowering and inclusive on the other hand.

Platforms produce complex new realities for work in the global South. While AI-embedded work platforms widen participation for some actors, they have also been known to leverage and reinforce the existing socio-cultural hierarchies that shape certain forms of work themselves. As we see in the examples above, although there is evidence of platformisation empowering informal workers, the algorithmic is likely to re-entrench precarity for informal workers unless there is situated reckoning of the unique historical and economic labour and employment needs of global South geographies, rather than a wholesale embrace of universal (or Western) AI futures. Most importantly, if we are able to hold the evolving data protection, technological innovation and employment conversations with an exclusive focus on informal worker and human-centric issues, only then can we build AI policy that is truly responsive to the needs of workers in the global South.

22 Gent, E. (2019, 1 September). The 'ghost work' powering tech magic. *BBC*. https://www.bbc.com/worklife/article/20190829-the-ghost-work-powering-tech-magic?ocid=global_worklife

23 Information technology-enabled services.

24 Metz, C. (2019, 16 August). A.I. Is Learning From Humans. Many Humans. *The New York Times*. https://www.nytimes.com/2019/08/16/technology/ai-humans.html

GLOBAL INFORMATION SOCIETY WATCH 2019

Artificial intelligence:
Human rights, social justice and development

Artificial intelligence (AI) is now receiving unprecedented global attention as it finds widespread practical application in multiple spheres of activity. But what are the human rights, social justice and development implications of AI when used in areas such as health, education and social services, or in building "smart cities"? How does algorithmic decision making impact on marginalised people and the poor?

This edition of Global Information Society Watch (GISWatch) provides a perspective from the global South on the application of AI to our everyday lives. It includes 40 country reports from countries as diverse as Benin, Argentina, India, Russia and Ukraine, as well as three regional reports. These are framed by eight thematic reports dealing with topics such as data governance, food sovereignty, AI in the workplace, and so-called "killer robots".

While pointing to the positive use of AI to enable rights in ways that were not easily possible before, this edition of GISWatch highlights the real threats that we need to pay attention to if we are going to build an AI-embedded future that enables human dignity.

GLOBAL INFORMATION SOCIETY WATCH
2019 Report
www.GISWatch.org

APC
ARTICLE 19
Sida