

Advancing Data Justice Research and Practice

(ADJRP)

INDIA REPORT

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New Delhi | India

March 2022



www.defindia.org

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*"I am not your data, nor am I your vote bank,
I am not your project, or any exotic museum object,
I am not the soul waiting to be harvested,
Nor am I the lab where your theories are tested,
I am not your cannon fodder, or the invisible worker,
or your entertainment at India habitat center,
I am not your field, your crowd, your history,
your help, your guilt, medallions of your victory,
I refuse, reject, resist your labels,
your judgments, documents, definitions,
your models, leaders and patrons,
because they deny me my existence, my vision, my space,
your words, maps, figures, indicators,
they all create illusions and put you on pedestal,
from where you look down upon me,
So I draw my own picture, and invent my own grammar,
I make my own tools to fight my own battle,
For me, my people, my world, and my Adivasi self!"*

~Abhay Xaxa

(Adivasi rights activist and sociologist)

Introduction

Digital Empowerment Foundation (DEF)'s work, since its foundation, has been to digitally connect several unconnected populations. In that sense, the organisation's work has been trying to bring representation and access to the marginalised section of society. The concept of Data Justice in its work might not be related to Artificial Intelligence (AI) and Machine Learning (ML) systems per se, but the issue of access in a country where half the population is unconnected is an important part. DEF is aware of the importance of data for every human being on earth and operating in India, it understands what this means for the most unconnected in India, the most underprivileged societies in India, the most underserved in India- the minorities, the Dalits, the Adivasis in India, women who are considered to be illiterate, uneducated or without digital access. It realises and works on the importance of the internet and digitisation as a medium in making the information accessible to the communities and the critical role digitisation plays in democratising the political systems and making them more accessible. However, the agenda of the organisation and the challenges have evolved over the past twenty years. India is also going through a crisis of misinformation and disinformation, where newly digitised communities fall victims to it the most. Fighting the misinformation ecosystem has emerged as a focus of the organisation in the past few years.

Simultaneously, DEF has also been keen on providing the right information about data to the communities. It has developed a curriculum on data literacy, and it is being used as training material in its community digital centres located in rural and remote parts of India. The current study has encouraged the organisation and the team to also work on developing a 'data policy for civil society organisations.' As

civil society organisations also collect data, it is important to have a set of policies on how to keep the data safe and private. Further, DEF has also realised that it is important to review various policies related to data in each state in India, to engage with the discourse on data more meaningfully in the coming days. This is a task that it sees as a preliminary exercise on data justice down the road.

More importantly, DEF also envisions a future where the marginalised communities not only have the right over their data but over how the data is collected, how the definitions of analysis are made, how the research questions are formed and how the technology is designed too.

Methodology

The ADJRP assessment was done by following key method steps.

It adopted a secondary approach to review and map such stakeholders in the AI space in India that would be critical to have their individual inputs as interviewees as well as to be part of the workshop in a cross-exchange and learning purpose on data justice-related aspects. This involved studying and reading emerging AI works in India at national and state levels, the initiatives involving citizens, groups and communities and looking at covert and overt ways of data injustices and the possibility and reality around it. This helped to identify, sorting respondents and participants at policy making, developers level and at affected community levels and approach them.

The work involved wholly on a primary method of engaging, involving interviewees and workshop participants to bring out key aspects of data justice-related issues and possibilities in line with the prelim guide questions including the

six pillars of data justice. The in-person engagements helped to receive direct inputs along with interesting cross-cutting aspects in data justice-related themes.

The approach of engaging the stakeholders was need and context-based. Every respondent contacted for the pilot research project was sent a brief on the six pillars of data justice, and two versions of the questions. A larger version, from the handbook to give a deeper understanding was sent. However, the basic ideas of the six pillars and the questions that come under each of them were shortened for the ease of the interviewees. The larger questions were overwhelming to most of the respondents, so a shorter set was contextualised according to the stakeholder and respondent.

Demographics

A total number of 12 people were interviewed for the study. In this five people identified themselves as the member of the public; one identified as the member of the public as well as policymaker given the fact that she has been part of one government committee; two people identified themselves as policymakers; three identified as developers and one identified as developer and policymaker. Two of the respondents were not familiar at all with the data- and algorithm-related technologies and had no training or education on these. The familiarity varied from extremely familiar to moderately familiar for the rest of them. Except for two respondents, everybody lived in India. Everybody we interviewed had a bachelor's degree or above. Except for two of the respondents who had moderate access to the internet and equipment, the majority of them had unlimited access to the internet.

Interviews

The ADJRP assessment involved interviews as a key format to engage stakeholders. A total of 11 interviews were conducted for the ADJRP assessment in India. This included – 3 policymakers/enablers at national and state levels; 1 policy analyst; 4 from the developer’s community; and 5 representing affected communities at the community level and research levels.

As mentioned earlier, the interactions with policymakers were the hardest to have. For most parts, they were either unwilling to answer in detail about the issues that impacted communities might have been facing as a result of inequitable access. Most simply refused to have conversations and the ones who did mostly agreed in words to understand the power relations and possible injustices, even as they were pointed out.

Most developers we talked to were aware of the potential that uncritical development of data collection and processing had in the past resulted in several injustices. Many were careful about what an unquestioned focus on neutrality and objectivity entailed. We had spoken to a developer who worked with speech recognition software to aid farmer interactions, and they were aware of the limitations of its inability to work with dialects and accents.

In the initial process of trying to look at case studies specific to our region and social contexts, we spoke to two contacts who were acquaintances, to get a broad understanding beyond what we already had. One of them was working with MeitY on a project on Data and AI. The other was a software developer who had worked on several FOSS projects in the past, and also writes on data policies.

Interactions we had:

1. President and CEO of National E-Governance Division (NeGD), Ministry of Electronics & IT, Govt. of India (AI is a core unit of NeGD).
2. Special Secretary, Health, Government of Andhra Pradesh.
3. A developer working on AI and robotics and had contributed to the national strategy on AI.
4. A developer working on AI speech systems.
5. A developer who had worked on AI customer support, and later teaches and researches on AI.
6. A developer working with a major computer manufacturing firm.
7. A representative from the Homeless Shelter in Delhi.
8. A transgender activist, who is a professor in psychology and cognitive science in Delhi.
9. A researcher who had worked on exclusions from NRC in Assam who also belongs to the Muslim immigrant community who were largely excluded from Assam NRC.
10. A leader of the platform workers' union.
11. Head of an NGO working on digital rights and a subject expert.

Interviews with Impacted Communities

The ADJRP India assessment of prelim guide questions involved the following key representatives from the impacted communities. Interviews were conducted around key guide questions and six pillars of data justice:

1. A representative from the Homeless Shelter in Delhi
2. A transgender activist, who is a professor in psychology and cognitive science from Delhi
3. A researcher who had worked on exclusions from NRC in Assam who also belongs to the Muslim immigrant community who were largely excluded from Assam NRC.
4. A leader of the platform workers' union

Summary

From the interactions with three impacted communities; people excluded from the Assam National Registry of Citizenship (NRC); people working with the homeless population; and the representative from the Gig and Platform Workers Union and a representative of the trans-community, several instances of deliberate exclusions, discrimination and profiling emerged.

Interviews on the National Registry of Citizenship brought out the nuances of building an AI-powered system to determine the citizenship status of a population with a muddled history of colonialism and anti-immigrant sentiment. Wipro¹

¹ <https://www.wipro.com/public-sector/digital-governance--achieving-citizen-enrolment-in-record-time0/#:~:text=Wipro%20partnered%20with%20the%20Government,100%25%20enrolment%20of%20Indian%20citizens.&text=Assam%20has%20been%20grappling%20with%20the%20issue%20of%20undocumented%20immigration%20since%20independence.>

deployed a Document Segregation and Meta Data Entry (DOCSMEN) software to digitise legacy data development of 39 million applicants in 2014. 1.9 million were excluded from the final list. The interview also pointed out that the 4 million people who did not have an Aadhar card², India's UID, were promised an Aadhar card after the NRC process, but continue to be excluded from all the entitlements and schemes linked to Aadhar. The government has already collected the biometric data, yet none of them knows what it is used for, nor can they reapply for a different Aadhar card as their application is "under process" for years. The interview also highlighted how the software-generated "family tree" system that verifies one's legacy data violated the basic human rights of hundreds of thousands of people who were involved in this process, either excluded from or included in the list.

An example was pointed out by a respondent who belongs to the Bengali Muslim community of Assam, seen largely scrutinised and victimised in the NRC Project. The Muslim immigrant community of Assam was brought into the State by the colonial administration as labourers to increase the revenue in 1826. They were brought from East Bengal – which later became East Pakistan and then Bangladesh³. The inclusion in the NRC list was based on something called the 'legacy document'. One needs to mention an ancestor who was included in an NRC done in 1951 or in the voter's list of 1966 to be in the NRC list. The legacy document should have the

² Aadhaar, India's UID project, assigns a twelve digit identification number to citizens based on their biometric and demographic data. Since inception and implementation, it has come under criticism for its issues of surveillance, privacy, data security, and exclusion from welfare.

³ Deka, K. (2014, June 4). *Bengali Muslims who migrated to Assam in 1871 are not 'illegal bangladeshis'*. Scroll.in. <https://scroll.in/article/664077/bengali-muslims-who-migrated-to-assam-in-1871-are-not-illegal-bangladeshis>

Azad, A. K. (2018, August 15). *Assam NRC: A history of violence and persecution*. The Wire. <https://thewire.in/rights/assam-nrc-a-history-of-violence-and-persecution>

name and address of the ancestor, the precise address they were residing in and the precise details of everyone who is part of that family from that particular ancestors' generation. Our respondent explained the enormity of the data one had to present and how the 'family tree' algorithm excluded several in this process. One family tree will have hundreds of people if they are basing it on their grandfather, including cousins and nephews. And each of these hundred people had to keep the matching spellings, including the spelling of the address, otherwise, the algorithm would exclude them from the list. Mild variations lead to exclusion and the grievance redressal process was reportedly even more vicious. Hundreds of these extended family members had to appear together before the tribunal to prove that they all belong to the same family. Our respondent pointed out that their plight is further complicated by the fact that the literacy rate of these regions- mostly floating islands, is as low as single digits.

Another important aspect pointed out in this is how the legacy codes given by the NRC Seva Kendra (service centres) led to the exclusion of several families. The applicants who were unsure about the address and other details of the "legacy source person" could go to the Seva Kendra to get a legacy code by providing their names and their legacy person's name. The code contains all the data about that particular person. However, if two families have the matching names of two of their ancestors, both the families would end up using the same codes for the legacy document. In the case of Assam NRC, many families had to fight each other in the tribunal to prove that the disputed ancestor was theirs. Our respondent recollected how, often, one of the families ended up losing the dispute and was excluded from the list.

According to the same respondent, the entire process of NRC citizenship contestation in the Assam State of India is built on a set of biased data: the D-voter list (the doubtful voter's list), the Assam NRC of 1951 and the 'reference cases' registered by the border police. Firstly, the 1951 Assam NRC was partial and several people were excluded from the list. The river islands of Assam that disappeared during the floods were only partially covered in the first NRC. These islands are largely populated by Bengali Muslim immigrants. Secondly, there were multiple people with the same names and ancestral names. If one of them happened to be in the reference case list or the D-voters list, all of them ended up getting excluded. The border police, deployed widely in Muslim dominant districts, has the right to search and collect the fingerprints of any 'doubtful' person.

From the interaction on the homeless shelters in New Delhi, the depth of a digitalised system of governance and health was revealed. Almost every health service, from following up on Tuberculosis (TB) Treatment (India is the highest in TB incidence statistics, with over 2.64 million cases), accessing vaccination, or even simply getting admitted to the hospital requires one to have identification like the Aadhaar, and at times even a mobile phone where verification OTPs are sent. A health scheme named Nikshay⁴ was designed by the government to cater to the nutritional requirements of recovering TB patients. As per the scheme a sum of Rs. 500 (~\$6.5) is transferred to the bank account of TB patients under treatment. Despite the high occurrence of TB in the homeless population, many of them can't avail of this scheme due to the lack of Nikshay ID and bank account. The homeless

⁴ NI-KSHAY-(Ni=End, Kshay=TB) is the web enabled patient management system for TB control under the National Tuberculosis Elimination Programme (NTEP)

community does not have addresses, and therefore no IDs. The majority of them do not have a mobile phone as keeping them safe is difficult. In this case, they are dependent on the shelter staff for all OTP-based ID authentication systems. This is further complicated by their status as migrant workers who travel from one place to another and can't come back to a single shelter to avail of any entitlement service.

Interview with the representative of the Indian Federation of App-based Transport workers union emphasised how the automated systems of payment and verification typically trouble the drivers and workers. Though personal information about the workers and drivers are collected by the app companies, yet when they need that data to prove their long association with the companies, they refuse to share that data with them. There exists a double standard of the companies when it comes to identity and transparency. While the drivers are mandated to reveal their identity before the ride and the details of their identity are stored with the company, the customers are not bound to provide proof of their identity. Even though the customers have to provide an OTP in certain cases, OTPs are transferable. The lack of identity proof is particularly troublesome for drivers when few of the customers disappear without making the payment under the pretext of getting change. The drivers do not have access to the phone number or the original name of the passenger to look for them. This was reportedly happening repeatedly according to our respondent.

According to the same respondent, the drivers have to bear the brunt of mismatching GPS guidance. He asks: "suppose the GPS is showing a 10 km distance and then the roadblock. so, in this case, we have to drive around another route, and

that is how I drove for 18 km right? Now, who will pay for that extra 8 km? The company completely refuses this fact and counter-quests us as to why we took the long route. They sit in the office and have no idea of ground reality and they don't pay for that extra 8 km". His testimony attests to the fact that the grievance redressal systems are embedded in exploitative power relations and hardly sides with the drivers. On the contrary, the grievance redressal systems of the customers are efficient and responsive as specified by this union leader. Similarly, it was also pointed out that the company algorithm often misinforms the drivers about the surge in demand in certain locations. The drivers, expecting a surge fare would drive to the locations only to find out that the algorithm was misleading them. They end up paying from their pocket for the extra kilometres they ride.

Interaction with another interview respondent, who is a trans-man and had worked actively with the community on several issues, brings out this fact. He spoke on NRC exclusion, the sex workers movement, and ML in science to broadly give an understanding of human biases. Trans-people are excluded from the NRC list. "Trans people had a combination of either missing documents because they fled abusive homes when they were young, or documents that were inconsistent". Around 2000 trans people were excluded as a result of this, and a legal battle is ongoing⁵. Other algorithmic exclusions that happened in the country were instances of applications to institutions, where trans-people's names were misidentified as referring to two separate people with two separate names- and then summarily rejected.

⁵ <https://thewire.in/rights/nrc-exclusions-assam-transgender>

The same respondent also explains how ML tools work in some of the other projects he is working and collaborating in. As he explained, the 'science' of personality research has a long classist and racist history- a pseudoscience where workers are analysed and decided which role to be given based on personalities. When these ML tools were fed with datasets from classical psychology, their research has shown how the program does not provide a justifiable cut-off for saying one of these categories of personalities are more valuable than another. This helps debunk the previously held theory on the psychology of personalities.

Another aspect in relation to algorithmic injustice is how human understanding is also based on certain algorithms, and how these algorithms are also fundamentally flawed and riddled with various confirmation biases. "Human algorithms work like what we call a Bayesian learning algorithm. We see priors in how the world works, and we continue to think the world continues to work that way." AI tools can be used to show that when one feeds in datasets that don't have a bias, it shows that several things or patterns (that human beings with their cognitive biases assumed existed) do not actually exist. Race, similarly, is shown as "an arbitrary category consisting of looking at specific combinations of superficial" factors like skin or hair; when all genes are considered together, there is no consistent difference between racial categories. In this way, ML tools can challenge existing notions of power structures.

Taking an example of cancer biopsies done by ML tools, the more data fed into the system can make diagnosis faster and more efficient. Of course, this has to be seen together with what the AI developers feel / need to be conscious of about

working across the stack and considering other social factors as stated in examples of baby-weighing and TB samples, but unbiased, centralised, anonymised records of all patients can be one such workaround in the design.

Takeaways and Pillars

The case of the homeless population shows how data injustice is cumulative. The domicile-based enumeration of criteria in national statistical systems leads to data exclusion, the lack of data leads to the exclusion from welfare schemes due to the lack of representational data which in turn leads to the invisibilization of their needs and lived realities. Digitalisation built on these fundamental inequities, instead of their stated agenda of empowerment creates barriers and deny them access to the public good. This case also shows how the concepts of equity, access and identity are interrelated when it comes to data injustices.

From the exclusions in the NRC list of minorities and trans-people which two of the respondents mentioned, the pillars of power and identity were the most relevant. The power relations that can be historically traced in the case of Assam, or in a cis-hetero normative society that invisibilises trans-people played here.

However, with the examples of how ML was used to question existing categories and biases, another interesting use of AI to challenge these structures of power instead of solidifying them was seen.

Interviews with Policymakers

As part of engaging policymakers in the space of AI in India, the project involved the following important resource persons, currently working in government at the highest level, at national and state levels. With due invitations and consent, the following policymakers and analysts shared their perspectives around data justice involving AI in their realm of works, impacting policy decisions, design, and implementation:

1. Mr. Abhishek Singh: He is one of the senior-most Indian Administrative Service (IAS) officers at the national level. He is the President & Chief Executive Officer (CEO) of the National e-Governance Division (NeGD) (<https://negd.gov.in/>), the primary agency steering e-governance in India and Artificial Intelligence, under the purview of the Ministry of Electronics and Information Technology (MEITY), India. He is also holding the key position of Chief Executive Officer (CEO) at MyGov (<https://www.mygov.in/>); and Managing Director (MD) and CEO of Digital India Corporation (DIC) (<https://dic.gov.in/>), at Government of India.
2. Mr. G. S. Naveen Kumar: He is a member of Indian Administrative Service (IAS). He holds the position of Special Secretary, (Health, Medical and Family Welfare), Govt. of Andhra Pradesh, one of the emerging States in India's South. He is involved in deploying key health solutions including AI-based health information services delivery applications in the State.

3. Ms. Urvashi Aneja: She is the director of an interdisciplinary collective, the Digital Futures Lab and was part of a government consultation on AI.

Summary

Many policymakers we contacted did not respond back to have a conversation. According to a few of the policymakers that did, it was claimed that there has been no such possibility of negative impacts from data injustices where AI is involved in the public sector and services, and that necessary prerequisites measures have been adopted and implemented to prevent any data related discrimination or misuse against any groups or communities. While they were aware of the most cited example of discrimination from instances like AI crime prediction software from countries in Global North because of historically biased data, they, predominantly seemed unacquainted with such discourses or examples in India.

One policymaker acknowledged lapses that may have occurred on their part while AI made decisions for one of the mentioned exclusions from basic welfare. He was open to discussions and consultations with the communities that could be impacted in the future before implementing AI systems. He also showed us the plans for a curriculum for AI to be implemented in technical institutes across his state.

From the conversations with the president of the National E-governance department, three documents emerged as an important framework to understand the data-related policy ecosystem in India.

- I. The Personal Data Protection Bill, 2019

In his opinion the Personal Data Protection Bill, 2019, once passed will be the Indian equivalent of the EU General Data Protection Regulation which will lay down the regulatory framework for collecting, handling and managing personal data.

II. The National Strategy on Artificial Intelligence, 2018

The National Strategy on Artificial intelligence, as briefed by him is based on seven principles: the principle of safety and reliability; the principle of equality; the principle of inclusivity and non-discrimination; the principle of privacy and security; the principle of transparency; the principle of accountability and principle of protection and reinforcement of positive human values. In his opinion, the enforcement mechanism should also be in place along with the regulatory mechanisms and these mechanisms should let technological innovations prosper while taking care of the basic risks arising out of it.

III. National Data Sharing and Accessibility Policy, 2012

According to him, the National Data Sharing and Accessibility Policy is based on the basic premise that data should remain open, it should be made available, searchable, indexed and made available for anyone who wants to use it. According to this data in each department would be classified into three categories: open by default, restricted and negative list (the data that will not be disclosed). He has also identified data retention policy and data anonymising tools as two supplementary components of this framework

The President of the National E-governance department also opined that the way to go forward in cases of possible exclusions due to the implementation of AI-

powered systems in governance is not to discard the programmes but to build support systems around them to avoid exclusions. For example, responding to the question of the data injustices that take place in India due to AI-powered systems in governance such as Samagra Vedika,⁶ he said: “I can think of an analogy. Very often we make highways, for the convenience of citizens, people move and that leads to economic growth and all. (But) accidents also happen. People do lose their lives. But what do you do? You try to ensure that road safety measures are taken up, people are made more aware, you ensure that if certain bottlenecks result in more accidents, you try to make them safer, you bring in more safety measures, cars are made safer, they are, people are taught about using seat belts, so these are the measures that you do to ensure that when people are using a highway, they remain safe on the highway, speed limits are prescribed. So similarly when we are building a data-based IT system for the larger public good, there might be some elements who'd try to gain the system, who'd try to subvert the system, there will be risks.”

Another respondent was a policy expert who had been part of government committees on AI. She mentioned that although there have been a lot of conversations around data trusts, data models and data co-operatives, there was not enough evidence or examples of their success so far, also due to their being co-opted by corporate interests. In this context, she says that academic institutions and NGOs

⁶ Samagra Vedika is an integrated platform comprising a 360-degree profile of every citizen in the state of Telangana using Big data, ML and Graph database.

<https://caravanmagazine.in/government/cancelled-ration-cards-deprived-telanganas-poor-of-food-rations-amid-lockdown>

have a big role to play in bringing the communities and the research together as well as in bringing the communities and industries together.

An important point was made by the Special Secretary of Andhra Pradesh was that there has to be an Ombudsman. In his opinion, there should be a Data Ombudsman similar to Information Commission. This should be independent or judiciary based, and not bureaucratic like other institutions.

Takeaways and Pillars

- The interaction with the policymakers provided an overview of the different frameworks that exist in India. They also explained how there are grievance redressal mechanisms and nodal officers in place to ensure the proper protocol. However, most of the responses were based on certain aspects of the AI/ML-enabled administrative systems which are essentially useful to the communities.
- When specific examples of exclusions were pointed out, they have also acknowledged that there are efforts in place to ensure smoother mechanisms. The power relations between the interviewer and the respondent also come into play while administering the questions on power and participation as the respondents are distinctively part of state power in this context.
- As an experience in this interview process, the interactions with policymakers were the hardest to have. For most parts, they were either unwilling to answer in detail about the issues that may impact / impacted communities as a result of inequitable access. The role of government official protocols and limitations are also limiting factors in such interactions seeking views on such a critical aspect like data justice.

Interviews with Developers

The developers working in the space of AI and data involving collation, processing and managing for public welfare, services for citizens, groups and communities are key stakeholders in this ADJRP assessment process in India. With due invitations and consent, the following groups of developers were engaged for interview sessions:

1. A Developer who was working with AI-related speech systems
2. A developer who had worked with a major IT company here developing AI customer support, but then moved to teach AI and Computer Science in a University abroad.
3. A developer who works with a major hardware manufacturer here.
4. An AI innovator and developer who has worked with an AI Research institute, developed tools for the government, and has been part of a government committee on AI.

Summary

The AI developers engaged had previously worked on or had developed AI-based tools or data systems. One developer, who is now working in the US on robotics, had previously worked with an Indian company and research institute which developed several AI-powered projects in collaboration with government departments.

One such AI-powered tech was an app designed for ASHA workers that helped them provide ‘accurate, timely, geo-tagged and tamper-proof weight

estimation' of new-born under a month of age. Accurately identifying low birth weight babies is the important first step to providing them with further healthcare. However, this proved to be a challenge as several records simply listed almost all babies as being *exactly* 2.5 kgs - the minimum healthy weight. Their solution consisted of software that converted a video taken with the smartphone the ASHA⁷ workers are provided into a 3D mesh of the baby which the software can use to accurately estimate the weight of the baby⁸. Here, AI solution is one part of the technology stack that has to fit into the workflows of everyone involved.

For developers, there is a need to be sensitive 'about preventing the unintentional bad,' and need to involve the community in the AI based data processes. India faces an acute shortage of doctors and agricultural scientists in relation to the population. In addition to talking about minimising damage from AI based data distortions and 'blind automation', there is a real need to understand how it can be used for good.

Designing solutions requires a different approach to avoid exclusions. 'Product innovation is about working with the users and identifying the market gaps.' In designing an AI solution demands one to look into other parts of the societal chain'- the example of the anthropometry solution ran into very different sets of errors that did not have to do with data gaps or biases. For one, even as the health system tried out the solution, it could not take into account the lighting conditions of rural Indian homes- which are not ideal for mobile cameras to measure such particular detail. Data collected under ideal conditions to build the software, say, from hospitals, would have much better lighting conditions. However, because

⁷ ASHA (Accredited Social Health Activist) workers are India's frontline health workers instituted by the Ministry of Health and Family Welfare as a part of India's National Rural Health Mission.

⁸ <https://www.wadhwaniai.org/programs/newborn-anthropometry/>

of a very stark existence of caste- certain parts of a village are caste ghettos- if the health worker doesn't visit the place, none of these data factors would apply in the otherwise ideal AI-based datasets. This was one of the issues with a TB detection software that was developed. The solution effectively detected TB samples with high precision, but the problem with India's TB infrastructure was not actually in the detection part. This connects with what the representative from Hausla shelter was mentioning on India's TB crisis, on how India's problem with TB is more social- the lack of policies and welfare benefits that directly help the patients continue their course of treatment and provide them with nutritious food, rather than at the stage of testing.

Regarding AI, "human workflows have to be modified so all of this forms part of a solution,' and this requires a multidisciplinary approach. The institute he worked for had to work with agricultural experts, with people who have social sector background in deploying programmes, doctors, product designers, engineers" to work between these workflows.

AI can reflect intent as "technology is fundamentally an amplifier of human intent.'. This points to the problem of weak institutions. There cannot just be 'unintentional bad,' but also 'intentional bad'. The developers have to be conscious of this.

"There are significant power disparities and these power disparities also apply across communities, across religion, across castes, across social-economic strata, gender, age, education levels," and the solutions cannot be for just the literate or digitally literate people. While designing any AI-based solution, the developers' community is and should be engaged in this understanding. There cannot be

Business to Consumer approaches without human intermediaries- which in these cases, are the agricultural extension workers or the ASHA workers.

There are issues around inclusivity. For instance, in developing AI tools for farmers on speech to text assistance, there are gaps in linguistic inclusivity.

According to the 2001 census, there are 30 languages in India, it is estimated that there are 1599 dialects within these main languages. India also has a complicated history of linguistic politics, where the official languages are the tongues spoken by the dominant communities and several regional dialects are considered inferior. The speech to text conversion software built did not identify these variations and catered to only a few dominant languages. This requires the collection of data from a large number of speakers to process it into efficient speech recognition tools. The issue is the lack of commercial interest to do something like this, even by the larger companies funding or behind such projects. The project this particular developer worked on, for example, did not include languages from the northeast, which is one of the neglected communities in India that have been facing systemic racism and exclusion.

The system he was working on was primarily intended to help farmers communicate and translate. However, in a practical scenario, the farmers do not exactly speak a formal, standardised dialect and accent. In such cases, there isn't any conversation within the developers' community on the representativeness of 'test samples' upon which these systems are built. Projects follow a top-down approach and work with budget constraints that do not allow developers a lot of freedom in redesigning the processes, nor for raising socially important concerns.

There are cases where AI tools dehumanise and minimise the dignity of workers. AI systems for customer support denigrates customer executives. This kind of software worked with chat transcripts in customer support, and offered suggestions in real-time. One respondent explained how, in the tech job industry, the customer support team is considered in the 'lower ends of the pyramid,' along with data entry operators. What the software does on the agency of these workers is instead of the expertise of the worker understanding and deliberating on the issue, the AI tool keeps providing solutions. This is not an issue of Luddism, but a general nature of AI being used that it undermines the agency of the individual, or human beings in general. This is applicable in the other examples. The AI, which these workers are unconsciously training, are also a constant reminder of the fact that with enough data it gets from these very workers, it would one day replace the jobs that they are doing. Thus there is the possibility of a major cab aggregator like Uber, which plans to use presently collected data to later train driverless cars. This issue of a workers' dignity that arises in a human-AI interaction is one that needs an interdisciplinary effort from computer science, social science and psychology. A profit-motive driven model as most current innovation is based on does not help understand this. There is no internal capacity nor mechanisms of critiquing this from within.

The homogeneity of the demographics of the developer population in an AI firm is indeed a problem, as this group lacks understanding of the problem of people facing marginalisation. AI firms having mostly demographically consistent with certain castes definitely lack the sensitivity of diversity and inclusion. There have

been instances where CASH complaints of citizen groups have been dealt with badly and the survivors pressured to resign. This is indicative of the PR efforts versus actual training employees are given and how the company practices it. And this broadly again emphasises the lack of representation and understanding in social issues in the developers.

Pillars and Takeaways

Most of these developers point out the lack of communication or any type of consultations between those who make policies or decide where to build software, the developers who work on it, and the community who would use/or be impacted by them. This is why several hit snags that aren't necessarily AI-based- development would later be abandoned because of other socio-cultural factors that they would not have previously thought of.

This also showed us how, despite the frameworks in place and strategy documents that mention it, there had not been any training, modules or courses for developers who work on AI systems about the way the tools they develop might impact larger communities. Two developers testified that during their education they had not come across such a thing, and one developer told us that AI/data terminology is not for the laypeople to understand, and instead should be left to the community of experts to only decide. This brings one back to the point the cognitive science professor from our other interaction was raising: the lack of social science training for science experts is a problem.

However, two important new themes emerged. One is the point of how, with weak democratic institutions and checks and balances, the analysis of AI should not be just limited towards the question of minimising bad but also to utilise the context scenario of a shortage of skilled workers and use it to maximise social good beyond the sense of efficiency. The second is a specific dynamic that AI technology and the agency surrounding it generally has on the dignity of humans and human labour. This aspect is less part of the discourse on AI and needs interdisciplinary approaches to be further looked into.

Workshop

For the ADJRP assessment, two workshop-cum-panel discussions were organised on digital mode (18th February and 25th February). The first discussion had one policymaker and three civil society representatives working with the impacted communities. It was attended by representatives from Community Information Resource Centres (CIRCs) from the ground, who run networks and centres that provide internet and information access to remote and otherwise unconnected areas.

First Workshop cum panel discussion (February 18, 2022)

The discussants were:

1. Jayesh Ranjan, IT secy of Telangana

Jayesh Ranjan is the Principal Secretary of the Industries & Commerce (I&C) and Information Technology (IT) Departments of the Telangana government. His assignment involves developing policy frameworks, attracting new investments, identifying opportunities for utilising IT in various government processes, and promoting the digital empowerment of the citizens.

2. Apar Gupta, Director of IFF, an internet rights NGO

Apar Gupta is a lawyer, activist and writer working on the intersection of technology and democratic rights in India. He is also the Executive Director of the Internet Freedom Foundation.

3. Nikhil Dey, Leader of MKSS, farmer and worker's movement

He works for the Mazdoor Kisan Shakti Sangathan, Suchna Evum Rozgar Adhikar Abhiyan and NCPRI. He has been actively working for

Right to Information, Mahatma Gandhi National Rural Employment Guarantee Act, Lokpal bill and Right to Food and other Human Rights organisations.

4. Rakshita Swamy, Lawyer and Policy expert from NLU

Rakshita Swamy is a public policy practitioner with over 11 years of experience in conceptualising, demonstrating and institutionalising mechanisms of social accountability in the delivery of schemes and functioning of public institutions, at the intersection of Government and Civil Society Organisations.

Summary

The Indian State of Telangana has an AI strategy already in place, having recognised a year as 'Year of AI,' and made efforts around these. In this State, there are scopes of misuse, and error around AI deployment and mechanisms to fix these have been taken. The state is also planning to introduce AI into the curriculum. It is acknowledged the need to develop AI and introspect it with respect to the six pillars of data justice, and of having oversight mechanisms in place.

There is a lack of cohesiveness in the policy or strategy documents that have been developed by various government departments and states. There are missing social or independent audits that demonstrate the effectiveness of outcomes in AI-based applications and deployments, as in the example of Aarogya Setu App (India's only App to deal with Covid-19 at pan India level). Utility audits are therefore necessary for AI-based systems. In the absence of a data protection law, AI-based deployment may utilise personal data for targeting.

There must be a fine balance between where data can be provided to

supplement decision making and where data actually makes the decision itself. There has to be clear safeguards, clear processes in place marking where data only facilitates and where it actually takes all the role for itself and makes a decision.

It is very hard to separate data from the right to information; it's a subset of the other that is getting increasingly larger. There is a need to look at how the decision making vis-a-vis data takes place, in the gathering stage, the aggregation and amalgamation stage and also in the stage of use.

The major takeaway from this discussion was how a policymaker acknowledged the six pillars of data justice as something to work on while looking at AI tools the state designs, and how, even while faults may have occurred, human intervention is still done in the particular case of the Samagra AI tool in Telangana State. The panel also raised the opportunity to replicate a successful public accountability system in the state of Rajasthan, to similarly work in Telangana State in building a similar portal for grievances.

Second Workshop cum Discussion (February 25, 2022)

The second workshop was originally structured to be a three-hour-long discussion divided into three thematics. Thematic one was planned on 'Implementing AI to address issues of communities' focusing on equity, participation and knowledge; thematic two was planned on 'Narratives of data-driven exclusions and invisibilisation'; thematic three was planned on "Towards data justice: situating and reimagining the existing frameworks".

The second workshop/ interactive session was attended by the following people.

1. Deepak Padmanabhan, Developer, currently a professor in computer

science, Queen's University, Belfast

2. Sai Bourothu, Network Co-ordinator, Queer Incarceration Project
3. Shaikh Salauddin, National General Secretary, Indian Federation of App-based Transport workers
4. Jatin Sharma, Coordinator, Hausla- for the Urban Homeless
5. Nidhi Singh, Senior Project Officer at Centre for Communication Governance - NLU Delhi
6. Parminder Jeet Singh, Executive Director, IT for Change, Member of the Expert Committee on Non-Personal Data Governance Framework
7. Srinivas Kodali (Developer, Researcher on Data)
8. Rahul Panickar, Principal Technologist at Vicarious and Former Chief Research and Innovation Officer at WadhvaniAI, a contributor to the National Strategy on AI
9. Osama Manzar, Founder Director, Digital Empowerment Foundation

Summary

A set of questions were shared with them over mail prior to the workshop keeping their backgrounds and the pillars of data justice in mind. The representative of the impacted communities narrated the specificities of the exclusion while others listened and responded to them. Jatin Sharma who works with the homeless community reiterated the point about the lack of data on homelessness and the problems with the enumeration systems. He also pointed out how defining the term 'homeless' changed the discourse around the homeless as the public discourse around them until then were mainly situated in biases and othering. Until 2010, even within state policies, the homeless were characterised as a 'nuisance' or 'people who

create traffic blocks. A favourable approach by the Supreme Court in 2010 has helped a change in this discourse and homeless began to be acknowledged as a vulnerable category within policy discourse.

Sai Bourothu, a queer rights activist and a transwoman herself also shared similar concerns around trans genders of connecting biases and definitions and explained how biased definitions lead to data exclusions. Adding on to what Jatin spoke, she pointed out how institutional governance never actually recognized transgender as an entity or as a biometric marker for any individual to have until 2014. As data is the primary marker for public policies and public welfare, the Trans community has been largely invisibilized, gentrified or ghettoised in the past 70-80 years of India's nation-building process. She explained how national statistical systems such as National Sample Survey Organisation (NSSO) contributed to this. One key example is this as shared by Sai Bourothu.

“Just one example is the 2011 national census that captured approximately 4,11,000 trans persons in India. But these numbers were grossly underrepresented because even in small areas, there exist community groups. When this data was shared for cross verification, and they were divided district wise, it came out that there is very clear evidence from community estimation that there is average of 200 people and yet the census data pointed out that there is average of 4 transgender persons in one district. So there has been a clear disparity in how the community is represented. What is even more difficult is that this is going to inform policy. If a welfare scheme even tomorrow were to come up which determines some kind of aid for trans persons, it's going to grant that aid with the assumption that [there are only] 4 lakh in the entire country. [It] does not take into cognizance the fact that

there might be so many more who have not yet been recognized or who have not been able to go through the governmental red-tapism yet to identify as such in some places.”

Sai and Jatin’s anecdotes showed how developmental data in India is prone to being biased and embedded in the normative definitions of gender, identity and domicile. Sai also expressed her concerns over the emerging predictive policing systems in India given the history of criminalisation the transgender community face in the background of the long history of the criminalisation of beggary in India. There is also the critique of the digitalisation of welfare schemes in general, as it closes the space for human to human negotiations in governance and government-mentality. Even in the process of seeking redressals, the automation makes it difficult to assign responsibility to specific authorities, as the decision now is taken based on a dehumanised system that is set up based on biases, assumptions, and norms that are fundamentally exclusionary.

Parminder Jeet Singh who was also part of the expert committee on the Non-Personal Data Governance Framework (NPD) opined that the problems of homeless people, people from the transgender community and the gig workers have a political context and these problems are magnified with the use of technology. While these injustices need to be resisted, the concern about the fact that these arguments often extend towards a standpoint that is essentially anti-technology. In the midst of some dilemmas on the collection of health data in the background of the health data retention policy, though poor people and civil society are concerned about their health data being collected, ultimately multinational hospitals would build technologically advanced health systems using the data of the rich for the rich and the poor and the under-privileged will be left out of it due to the lack of

representational data.

“Now the same people who do not want so-called poor people's data to be collected, go to an AI conference and they're constantly complaining about data bias in AI. Of course, there will be data bias if you don't allow data collection of certain kinds of people. I know the problem with blacks in the US, with Dalits in India, but this is the reality of the two sides of the problem. On one side the need for inclusion of the data, because everything in the world, education, health, agriculture, everything is going to become data-based and if data is not there, one will be finding deficient services.”

He added to substantiate. He also spoke about how the NPD framework goes beyond the two usual policy frameworks which either advocates market innovation within a regulatory framework or a model of benevolence which advocates philanthropy. In the right based approach of the NPDG framework, the data subjects, individual and collective have a right over their data and the value of all the derivative data would be with the collective.

Responding to Paraminder, Rahul Panickar added that, it is important to speak about two aspects of data justice, one the inclusion of representation in data at the same time minimising the harm AI-powered systems can cause.

Shaikh Salauddin from the platform workers union reiterating the earlier points on how the platform apps are essentially anti-working class. He also commented that even though these algorithms seem neutral, essentially they decide who gets more rides and incentives.

Deepak spoke adding that the problem is deeper than the AI itself, because some optimising factors, like say, accuracy over the entire population, might be introducing a majoritarian bias. Also, the system under which it works, is driven by

profit motives, like in the case of most platform apps like Uber. “Uber cannot just become participatory because it's fundamentally embedded deeply within the capitalistic economy, it is accountable to shareholder value maximisation and so on. And if the structure is inherently changed and made co-operative, then one can imagine things differently.”

Linking Paraminder and Salauddin’s points, Srinivas Kodali spoke about how the struggle for justice is not against the collection of data as such but about who decides what data is to be collected and what data is not relevant to collect. He gave an example of health data. The health data collected is being used to build a data economy by a few organisations. Beyond having collective bargaining power over the economic value of this data, communities and collectives should also be part of the decision-making process on what data is collected and what it is used for. Referring to the NPD framework mentioned by Paraminder Singh, he said that within this framework, the health data of an uber driver or the harms of sitting for long hours would never be a concern of data science analytics. one can imagine data justice as a framework where less privileged people not only have rights over their data, but also have the power to decide that the data is used for getting insights on their own well-being.

There is a need for regular dialogue between impacted communities, the policymakers and the developers and need to deconstruct the assumptions representatives of each of these groups had about others. An important aspect of this workshop cum dialogue was an acknowledgement from the policymaking community and the experts that there are more nuances and more historical power relations at play when it comes to AI-powered systems.

Conclusions and Recommendations

Broadly, from the several interactions we had across stakeholders, some key points have emerged. These conclusions from our interactions include areas of research less highlighted upon in the existing discourse, and recommendations across stakeholders and future plans from the part of our own organisation to continue engaging with communities on practising data justice.

1. An ethics committees should be in place within IT companies to ensure inclusion, prevent biased data collection, ensure representation-
Several of the developers we talked to, and other communities who have been following them, mentioned the issue of the demographic composition of the workforce and decision-makers. Focussing on the pillars of Participation and Power, meaningful participation with representation can lead to a transformative inclusion.
2. Courses on AI should have modules on data justice:
Another point raised across the workshops and interviews both were regarding the general lack of social science education and understanding of the ethical, social, political implications of the tools they are designing and the power it holds. While the several strategy and policy documents for AI mention about the social impacts, on the ground, such discourses are not part of the curriculums in technical education institutions yet. It is imperative, therefore, that developers who design AI systems should have a broad understanding of the dimensions of social justice their systems will interplay with.

3. Vernacular resources should be made available for the common citizen to understand what is data and what is data justice.
4. The Aadhaar, or India's national project to build a UID for all its citizens have been flagged on multiple levels in the past for the power such data concentration holds. As the Data Justice project looks beyond these questions of data protection and surveillance, our interactions unearthed possible social exclusions the Identification entails. Using AI to look into datasets the Aadhaar is linked to, enforcing it to avail welfare benefits in a system where access itself is an issue, has led to several exclusions. With new similar identification programs are also in the works, the entire project needs to be audited and assessed, as well as redressal mechanisms put in place that do not put the burden on the welfare beneficiaries. There should be transparency in such processes, and sufficient consultations with the impacted community before being put into place.
5. Issue of access infrastructure:
A general point from our interactions that are relevant to India, and our own organization's work on the ground bringing internet connectivity to communities is the issue of access infrastructure. One of the fundamental questions of data justice in India actually goes back to a fundamental question of access, to data, information, digital infrastructure, digital knowledge and literacy. To be counted as part of the process is an important factor. As the transgender activist we talked to mentioned,

“most of the arguments on sex workers rights or trans rights aren’t fundamentally dependant on numbers, because anything that is stigmatised will anyway show up in smaller numbers. Our argument is not around numbers. Even if there is one person, what policy should be in place. But to the extent that policymakers want numbers, it matters”

This is the same for most marginalised identities that aren’t counted as part of the system. Also, as our interactions from the homeless shelter showed, most technologies or solutions are designed counting the privileged in mind- and this is a complicated term because, in most of the global south, access to these technologies or the know-how puts one in the relatively privileged sections of society.

6. There should be a comprehensive social auditing and policy analysis of the different AI frameworks and strategy documents that have been made by several individual states (like Telangana) and other central government institutions (like NITI Aayog) in India.
7. The dominant, existing research on data justice points out to the aspects on how data is biased, technology amplifies the biased data and therefore impinges on social justice. In the context of the global south, however, there are some differences in the social and economic scenarios. With a doctor ratio of 1:1511 and a nurse ratio of 1:650 compared to the UN mandates of 1:1000 and 1:300 respectively, India faces a shortage of doctors and skilled medical experts. This is where the points raised by our interviewees are important. Unbiased medical data and automation might help in diagnosis. Just as the pest detection algorithms have worked in the scenario of shortage of experts.

The discourse should expand to include how AI can be used for social good, while keeping track of how AI solutions aren't an end solution in itself, but a part of several social problems. Then there is also the problem of how AI can be used for intentional bad, not just unintentional bad. From the example of how software deployed led to the removal of minorities from the electoral rolls, there is sufficient reason, introspecting the existing dynamics of power in both the national and state levels to doubt a possible intentional subversion under the supposed objectivity and neutrality of a computer algorithm. A similar case that did not come up actively in the discussion but that could be noted as linked is the 2020 North East Delhi Pogrom, where CCTV footage and AI-based facial recognition was deployed. Of the arrested, several still are undertrial prisoners, and there have been wide allegations of this being used to target minorities.⁹

Given India's size, diversity, caste, geo political history, partition and colonial history, it would be a blunder to copy the policies of the west in policies, let it be on "good" uses of AI or "bad" uses of AI. It needs to be constantly scrutinised and audited as what is good and what is bad is closely related to what the dominant group thinks as good and bad.

⁹ <https://www.thehindu.com/news/cities/Delhi/1100-rioters-identified-using-facial-recognition-technology-amit-shah/article31044548.ece>
<https://www.reuters.com/article/us-india-citizenship-report-idUSKCN24I1JA>