Journal of Polity & Society (2023) 15(1), 73 - 87

Taking Stock of the Digital Welfare State: Databases and Automated Welfare in India

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In India, automated eligibility systems, databases, and digital identification mechanisms are increasingly incorporated into the public sector, especially in crucial services like welfare at local, sub-national and national levels. Efficiency, inclusiveness and speediness are the state-proposed benefits of digitisation of the welfare sector. However, global experiments with welfare automation technologies provide ample evidence of flaws and discrepancies in their operation alongside the opportunities. This paper analyses specific issues concerning automation in India in the twin contexts of the absence of a comprehensive data/ smart-technology regulatory architecture that safeguards beneficiaries from the possible grievances they encounter in the technology-driven delivery of welfare and the increasing concerns about AI and intelligent technologies in general. It looks into the welfare automation initiatives of the state governments in the country and tests the viability of such projects with specific risk factors inferred from global experiences- accountability, privacy, transparency and exclusion/inclusion. Initiatives like Bhamashah Yojana in Rajasthan, Samagra in Madhya Pradesh, Samagra Vedika in Telangana and SARAL/PPP in Haryana are scrutinised to understand the intricacies of welfare automation in India.

Keywords: Automation, Welfare, Digital Welfare State, Databases, Transparency, Accountability, Privacy, Inclusion

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In 2012, the Government of Madhya Pradesh began a state-level integrated social security programme called Samagra, which operates through a digital database and an application platform. According to this scheme, the state database comprising the socio-economic data of the residents aggregated through a state-wide household survey is utilised to administer welfare and other government services (Chandrashekhar, 2012). The main objective of Samagra, which was implemented as an inclusive, comprehensive, and transparent welfare delivery mechanism, was to recast governance from demand-based delivery to proactive governance (Chandrashekhar, 2012). In this proactive turn, governments act in time, realising the needs and wants of the population. This state-level policy in practice since 2012, however, was a symptom of the larger changes that were taking place in governance and policy-making in India and around the globe with the digitisation and the offset of innovative technologies that are in a capacity to exploit digital datasets/databases in a variety of ways.

Today, big data, data analytic techniques and machine learning are the key technologies the states employ in transformative services like the welfare and benefits sector ("Big Data Analytics: Game Changer for E-Governance", 2022). The traditional

welfare states are transforming into digital welfare regimes wherein social protection and assistance are channelled through smart technologies which can "automate, predict, identify, surveil, detect, target and punish" (Alston, 2019). The digitisation drive initially took welfare delivery to virtual platforms and applications. Now, digital databases, identity authentication systems, machine learning mechanisms and eligibility determination models are incorporated into the process of welfare delivery, taking the digitisation process a step higher for automation. At a macro level, the digital welfare state put forward the goals of the welfare state in the age of advanced technologies, such as inclusivity, cost-efficiency, techno-driven social progress, targeted and better delivery of services etc. At an individual level, such a state promises better in-time delivery of services with less bureaucratic hurdles.

In India, digital citizen-tracking, automated eligibility systems and digital identification mechanisms are increasingly incorporated into the public sector and governments at local, sub-national and national levels. They are implemented with the goals of efficiency, inclusiveness, speedy delivery and prevention of welfare leakages. Though it promises enormous benefits, they are also ridden with multiple serious concerns. Automation technologies are viewed as the railing that separates citizens from their legal rights (Eubanks, 2018). Other issues concerning transparency (Coglianese & Lehr, 2019), accountability (Diakopoulos, 2016), privacy (Hillebrand & Hornuf, 2021), social justice (Zalnieriute et al., 2019), machine biases and rights (Waldman, 2019) are also significant ones. This paper is concerned with specific important issues ridden in the techno-driven delivery of welfare services which can plausibly pose threats to the public welfare system in India.

Digital Turn in Welfare: Databases and Intelligent Technologies

Governments increasingly rely on digital technology, data and e-government (Schou & Hjelholt, 2019). This development was mainly the result of the Internet in the 1990s; the government came to be called digital government, one-stop government and e-gov (Gronlund & Horan, 2005). The main components of the new shape of this government with the use of ICTs and the Internet are i) efficient government, ii) better citizen services and iii) enhanced democratic process (Gronlund & Horan, 2005). Worldwide, the digitisation of government-prioritised social welfare practices (Gillingham & Graham, 2017). A Digital Welfare State (DWS) is regarded as a model of distribution and determination of public welfare benefits using technology and data (Larasati, Yuda& Syafa'at, 2023). Since data and technology possess tremendous social capabilities (Mayer-Schönberger & Cukier, 2013; Susskind, 2018; Pasquale, 2015), they are adopted and expanded by the state. As mentioned, efficiency is the most important goal of a digital welfare state. The distribution of benefits and assistance is done with the aid of databases (aggregation of various kinds of citizen data) and data analytics tools. These technologies are designed mainly to detect fraudulent and ineligible claims on public resources and end welfare leakages, thereby problematising the very idea of 'efficiency'.

The Michigan Integrated Data Automated System (MiDAS) was a federal smart governance model implemented within the USA, which wrongly detected 34,000 unemployment fraud cases in a specific period. This flawed 'fraud risk' assessment resulted in huge social costs "ranging from evictions to divorces, to credit score destruction, to homelessness, and to bankruptcies" (Ranchordas & Scarcella, 2021). Concerns about accountability and transparency in automating welfare have been

raised in cases like Medicaid, a medical insurance programme in the USA, which shows that the automated system rarely justifies the denial of claims and that people are never made aware of who should be held responsible for their sufferings. The philosophy of this automation rests in the neoliberal market economy wherein the public sector faces resource constraints. Technological deployment is done to cut public expenses by prioritising exclusion (Eubanks, 2018). Scholars warn about a digital welfare dystopia into which the world would stumble if states continue to be obsessed with "fraud, cost savings, sanctions, and market-driven definitions of efficiency" for welfare regulation (Alston, 2019). These systems' operations remain mostly opaque; thus, transparency, accountability, due process and grievance-redressal are all significant concerns they encounter. These mechanisms not only fail to disrupt structural inequalities within each society and culture but also aggravate the inequalities and divide (Sinanan & McNamara, 2021). Furthermore, most countries built large databases and appropriate citizen data for various purposes sans a comprehensive data and AI regulatory legal framework that addresses the threats to citizens' rights and privacy.

In this backdrop, a data-rich country like India, which is simultaneously a developing country, has to address the questions of poverty, unemployment, education, health, infrastructure and economic growth when innovating advanced technological solutions to governance, mainly in welfare allocation, needs to be extra-cautious of their implications. The country is prone to all the problems such solutions have encountered across the world. This paper is strongly grounded on the literature review of the risks associated with automated welfare models across the globe.

Digital Welfare State in India

In India, post-independence, the state delved largely into welfare and benefits delivery which expanded over the years (Tillin & Duckett, 2017). Though not successful as expected, welfare was considered a key to political legitimacy (Ehmke, 2012). Fragmented and charity-based distribution of benefits was the initial face of the welfare state in India (Jayal, 1994). Also, clientelism, corruption, red-tapism, and many issues persisted in the welfare allocation processes. Since liberalisation, scholars observe a shift in the approach from charity to rights-based delivery (Ehmke, 2012; Tillin & Duckett, 2017; Jayal, 2019) wherein welfare is recognised as a right of the citizen rather than the benevolence of the state. The technological deployment served as a crucial strategy to this end. However, enhancing technological infrastructures for governance is not a new phenomenon in India. This process started in the 1980s when AI research centres were founded, and programmes such as Eklavya (healthcare software) and Automated Legal Reasoning Systems were implemented in India (Joshi, 2020). In the later decades, programmes like the JAM trinity, the Jan Dhan account, Aadhaar, and Mobile Phone expanded technology architectures within the government sector (Anirudhan & Dutta, 2020). Today, India is much appreciated by international communities like the International Monetary Fund (IMF) for developing foundational Digital Public Infrastructure with the introduction of Aadhaar, Unified Payment Interface (UPI) and data exchange initiatives that facilitate various citizen services (Alonso et al., 2023). Welfare is the provision of services that enhance the minimum standards of living. It covers social security, monetary assistance, health care, employment assistance, housing and education.

In the digital welfare state, all these areas of welfare provision are digitised; digital tools are integrated for better, efficient delivery of these services. With digitisation, identity verification and eligibility assessment become stringent as machines monitor these processes. Such a welfare regime focuses on excluding people using fraud-detecting tools and techniques and not on inclusion (McCully, 2020).

Responding to these developments, the Indian State has been formulating various data policies since the last decade (Biju & Gayathri, 2023). The discussion paper on Data Empowerment and Protection Architecture, released in 2020 by NITI Aayog, the government public policy think tank and the agency in place of the Planning Commission, enlists the major aims of a data regime in the country. They were an individual-centric data management system, data democracy, financial inclusion and empowerment of all, especially the poor and needy (DEPA, 2020). It released another document called National Strategy for Artificial Intelligence/Responsible AI for All in 2021. Though similar legal safeguards exist within the country, India lacks a comprehensive nationwide data regulatory architecture that focuses both on 'empowerment through data' and 'protection of data'.

Digitising welfare with the help of data was intended to strengthen the rights-based approach by ensuring transparency, accountability and quick delivery (Carswell & Neve, 2022). Various projects like Digital India, Aadhaar, MyGov, Mobile Sewa, and DigiLocker were initiated with much celebration in the last decade (Banerjee, 2022). Today, automated decision-making is widespread across different realms of governance in the country (Joshi, 2020). Most of the time, when these systems are credited for efficiency, stopping welfare leakage, transparency, speedy and targeted delivery, they are also critiqued for various issues like privacy violation, rightlessness, datafication, surveillance, exclusion and discrimination (CHRGJ, 2022; Carswell & Neve, 2022). State-level databases akin to Samagra are fast spreading across other states. This paper looks into the endeavours of state governments in India to utilise citizen data for welfare and service delivery, especially by building large databases and deploying data analytics techniques, however, sans a central, common and robust data protection and regulatory framework. Understanding the functioning of initiatives like Bhamashah Yojana in Rajasthan, Samagra in Madhya Pradesh, Samagra Vedika in Telangana and SARAL in Haryana, the study raises certain socio-legal and ethical concerns about federal digital databases and their application mainly in the field of welfare. It analyses the plausibility of these models to encounter four kinds of risks: transparency, accountability, privacy and inclusion/exclusion.

Methodology

The research maps the evolving digital welfare state in India with a focus on four welfare automation models in practice in different states in the country. These four models are- Bhamashah Yojana (Rajasthan), Samagra (Madhya Pradesh), Samagra Vedika (Telangana) and SARAL/PPP (Haryana). Apart from these models representing four regional locations in India, they reflect more on the different kinds of governmental investments in digital infrastructures for welfare delivery. Case files of these four models are created from sources such as online newspapers (2010-present), government documents (Bhamashah Yojana: A Promise to Empower; Samagra; Samagra Vedika), field study reports (MicroSave study; Haryana Institute of Public Administration field report; IPR Report), and research articles. The data

thus collected through these are analysed using the framework developed through the literature review; that is, the efficiency of these models is tested using four risk factors or variables. They are accountability, transparency, privacy, and inclusion/exclusion. The paper addresses these concerns from the bottom level, as they arise from the people. It is a quality check of automated models in practice in the country using four variables selected due to their significance; i) as the most reported risks within automated welfare models (Coglianese & Lehr, 2019; Diakopoulos, 2016; Eubanks, 2018; Hillebrand & Hornuf, 2021; Zalnieriute et al., 2019) and ii) as the crucial elements for the practice of good governance (OCHR, n.d.). This analysis would bring out the threats, if any, that exist in the automation of the welfare state system in the country from a bottom-up and popular canvas of the digital welfare state.

Databases and Welfare in the States

The paper analyses automated governance models initiated by state governments in India, like Bhamashah Yojana in Rajasthan, Samagra in Madhya Pradesh, Samagra Vedika in Telangana and SARAL in Haryana, their operations and implications, highlighting mainly serious concerns arising at the societal level.

Bhamashah Yojana: From State Benevolence to State Surveillance?

Named after a historic figure revered for benevolence and philanthropy, the Bhamashah Yojana or Rajasthan Public Welfare Benefits Delivery Scheme, was one of the pioneering initiatives in the country that envisaged a data-driven digital welfare system through the creation of a state-wide household data registry. Given that the welfare state in India has never been a rights-based delivery state but instead has served as a benevolent patron of citizen needs, it is not surprising that a service delivery and welfare programme be named after a philanthropist (Jayal, 1994). Introduced in 2008 with the aims of financial inclusion and women empowerment, Bhamashah Yojana took six more years to transform into a complex digital welfare mechanism in the state (Bhamashah Yojana, 2015). The intended benefits of the revamped scheme enlisted by the government were the empowerment of women, financial inclusion, an end-to-end service delivery platform with transparency and real-time delivery, closer-to-home banking services, and the creation of a uniform database that can administer targeted welfare (Bhamashah Yojana, 2015).

The enrolment process for the residents was undertaken in 2014, both online and offline. Subsequently, a family-based identity card called the Bhamashah Card was issued to the families in the name of the woman head of the household. Nearly all the beneficiary schemes and services in the state say both the cash and non-cash benefits like Public Distribution System (PDS), education scholarships, payments under MNREGA and Social Security Pensions, distribution of scooties to students, Indira Awas Yojana, CM BPL House, Janani Suraksha Yojana, Unemployment Allowance, Skill Training etc., were processed and transferred through the bhamashah identity card (Bhamashah Yojana, 2015). Aadhaar, the national biometric identification card, was a prerequisite for accessing benefits through the Bhamashah platform.

Bhamashah Resident Data Hub (BRDH) was built with the socio-economic demographic data collected during the enrolment process, family bank account details, and Aadhaar data. BRDH was the uniform and centralised dataset of the residents of the state created to administer targeted delivery of benefits directly to

the beneficiaries. After the authentication of the identity and eligibility through biometrics and the family data in the dataset, various services and benefits, from unemployment allowance to food grains through the Public Distribution System (PDS), are directly administered to the claimant and the family. The benefits of BRDH claimed by the government are many, from targeted welfare to reducing welfare leakages and efficient service delivery to informed policy-making (Bhamashah Yojana, 2015). Apart from BRDH, the Transaction Mapper was another vital component of the scheme. The latter equips the state to oversee the financial transactions that take place through Bhamashah. The scheme had a comprehensive and vast technological architecture that covered a data registry, mobile application, online portal, online service centres, IT parks, call centres, biometric identification, processing software, micro ATMs, payment gateways, etc.

In December 2019, the state's cabinet, led by the Congress Party, decided to scrap Bhamashah, a programme implemented by the previous BJP administration. Instead, the Jan Aadhaar scheme was introduced with the aim of catering to more services. This card is made mandatory to get welfare benefits in the state (Meena, 2019). Jan Aadhaar also keeps track of the data of citizens, say, health data like the number of times they have been hospitalised, the total money spent, the diseases diagnosed, etc., while they are availing of health benefits with the help of the card (Nandan, 2022).

Samagra: A Cradle-to-Grave Government?

Samagra is an integrated social security programme that functions through a database and application platform implemented in 2012 in Madhya Pradesh. It was introduced to address the problems with the fragmented and isolated implementation of schemes that result in the redundancy of procedures and processes. The main aim behind the introduction of Samagra was the transition from demand-based government delivery to proactive governance, wherein the state gets to citizens beyond a point to ensure efficient, holistic, and inclusive service delivery. According to this initiative, a population register was created through a household survey about the socio-economic profile of around 1.8 crore families and 7.7 crore residents in 2012 (Chandrashekhar, 2012). Family ID and individual ID have been provided after the enrolment processes. The identity card is a requirement to acquire welfare. The objectives of the scheme were family-specific development, a proactive and entitlement-based model of governance, and door-to-door delivery of services. The National Informatics Centre (NIC) handles and oversees the database, application platform, and online portal. Life events, say birth, marriage, and death, are updated within the platform, enabling the government to provide entitlements at the proper stages, say maternal assistance, education scholarships, marital assistance, old age pensions, funeral assistance, insurance, etc. The database also contains the residents' bank account details, which helps facilitate all G2P (government-to-people) payments through Samagra.

It is a model that envisages data-driven and timely intervention of government in the affairs of citizens. For instance, according to Samagra, when a birth is reported, this initiative automatically increases the quota of ration of the family and also ensures monetary assistance, or the system provides old age pensions when the beneficiaries reach a particular age (Chandrashekhar, 2012). The programme links the life cycle events of the beneficiaries with the benefits and services they are entitled to. Samagra

integrates 25 social security programmes covering health, education, and food; 45 schemes of scholarships and assistance from various departments; and 14 schemes of PWD welfare, along with sanitation, agriculture, etc, on a single platform. The facility for tracking the status of benefits rendered is made available to individuals, their families, and the public for social audit (Chandrashekhar, 2012).

Parivar Pehchan Patra and Antyodaya Saral: Kendras to Mediate Services

Parivar Pehchan Patra (PPP) is the eight-digit unique family ID card issued by the state government of Haryana to households in the state. Family Identity Data Repository (FIDR) has been created through the ID. PPP is integrated into the Antyodaya Saral, an e-governance initiative for delivering services and welfare "faceless, cashless, and paperless" (Singh, 2020). The initiative launched in 2017 attempts to digitise 600+ services across over 38 departments. It is a single online platform that provides over 540 services and schemes (Maan & Gupta, n.d.). People can apply for any service online and check or track the status of the application. It is said that people get notifications about the updates of their applications. Also, the initiative covers a helpline query system and grievance redressal mechanism. The intended benefits of this scheme are timely delivery of services, a good user experience, and data analytics-driven service delivery.

Samagra Vedika: An Example of Automated Decision-Making

The Information Technology, Electronics and Communications Department of the Government of Telangana launched its smart governance software, Samagra Vedika, also known as Samagra Telangana Smart Governance Platform, in the state in 2017. It is a government database infrastructure that integrates 30 government departments for automating governance, from welfare to policing. Various computational techniques like big data analytics, graph database, entity resolution, machine learning, and AI-powered image recognition are ingrained in this software. The main aims of this infrastructure put forth by the government are better citizen delivery, transparency, and accountable and efficient governance (Rao, 2019). It is not a stagnant data repository that accumulates data but is utilised for multiple purposes. This platform is currently used to enhance targeted welfare delivery and avoid welfare leakages. It prioritises the prevention of 'wrong inclusion', that is, dodging unqualified welfare applications with innovative technologies that detect and deter identity, quantity, and eligibility frauds (Rao, 2019). For instance, if an individual applies for the Aasara Pension, a pension and financial assistance scheme for the vulnerable in Telangana, the concerned department can cross-check the identity and eligibility of that applicant with Samagra Vedika, which has the data about the individual, such as personal identification data, relationship data, and property-income data, to ensure if that person is really eligible for the pension. After verifying with the citizen database, the software would sort the applications into four categories: 'qualify', 'qualify with verification', 'consider as low priority' and 'do not consider' (Rao, 2019).

In short, multiple and varied data of citizens are made into a database that on-demand utilises intelligent technologies to determine and decide the eligibility of welfare claimants barely without human intervention. Telangana's Samagra Vedika is one of the most praised and advanced models of database and automation of welfare

among many in India and is also an example of automated decision-making, which is in a capacity to determine the eligibility of the welfare applicant (Nanisetti, 2019).

An Evaluation

The automated welfare models implemented at the state level appear as efficient and innovative models of governance that ensure timely and targeted delivery of welfare and benefits. However, these models have to be evaluated since such models across the globe have encountered certain serious concerns. The study selects four variables- transparency, accountability, privacy, and inclusion/exclusion. There are several issues concerning automated models, but most problems can be grouped into either of these four. Also, these are the most reported and common problems across the digital welfare state systems (Coglianese & Lehr, 2019; Diakopoulos, 2016; Eubanks, 2018; Hillebrand & Hornuf, 2021; Zalnieriute et al., 2019). And they are important components of good governance in this era that impact the quality of state-citizen relationships (OCHR, n.d.). Above all, these initiatives were introduced with the aim of securing particularly transparency, accountability, privacy and inclusivity (Chandrashekhar, 2012; Rao, 2019). Thus, evaluating these models according to these parameters ensures a primary but significant quality check on the evolving digital welfare state system in India.

Transparency

The importance of transparency in governance is well acknowledged. Although its breadth and meaning are debated, it is primarily considered a positive component. It can be characterised as an organisation's openness in how it operates, behaves, and intends to act (Felzmann et al., 2020). All these models discussed strongly focus on transparency in welfare delivery. Their social operations, however, show that the objective was not successfully attained. People in the case of Bhamashah weren't truly aware of how the system worked. Rarely do those whose benefits were discontinued when the Bhamashah platform was introduced know the reason why services were ended; they were not given any explanation (MicroSave, 2017). Both the Samagra project and SARAL in Haryana failed to educate the populace about databases and their use; the government channels of communication were ineffective (James, Copestake,& Sharma, 2019; HIPA, 2021). It is unknown if the claimants who have their claims rejected by Samagra Vedika in Telangana are given more information regarding the grounds behind the rejection of their claims. Only a few documents and reports on Samagra Vedika's activity are available in the public domain.

Accountability

The discussion on accountability comes along with the question of transparency. If the system is transparent, people already know whom they should hold accountable for their concerns. Scholars advocate the need for developing an accountability framework within technology since the machines are not entirely foolproof (McGregor, 2018). In a field study conducted by MicroSave, pensions of around 1500 alone in a block panchayat were stopped without giving any reasons by the platform. However, only 200-300 of them were ghost claimants. Many rejected claimants do not know why their benefits were cancelled, which they were accessing until then. People are not aware of who should be held accountable for their stopped pensions or rejected unemployment allowance (MicroSave, 2017). Samagra ensures

TABLE 1: ANALYSIS OF AUTOMATED MODELS USING THE RISK FACTORS

STATE GOVERNMENT SCHEMES	*TRANSPARENCY*	*ACCOUNTABILITY*	*PRIVACY*	*INCLUSION/ EXCLUSION*
Bhamshah Yojana, Rajasthan	People are rarely aware of the operations of the scheme. Rarely do those whose benefits were terminated when the platform was introduced recognise the reasons behind the termination of the services (MicroSave study, 2017)	The government's Sampark Portal worked to address complaints. However, the majority of the households spoke with officials at the village or block level. Most often, Pradhans had to work very hard to resolve the problems. The public is unaware of whom they should hold accountable for their suspended pensions or denied unemployment allowance (MicroSave study, 2017)	Citizens are not involved in the decision-making of the scheme. Most of them enrolled due to the fear of losing benefits. Thus the consent for data collection and integration is generated coercively (MicroSave study, 2017)	Bhamashah became a hurdle for accessing welfare in many cases. The household enrolment processes have been done in a short period; the datasets are ridden with errors and typos. This was accompanied by software glitches that generate new kinds of exclusion (MicroSave study, 2017)
Samagra, Madhya Pradesh	Literacy rates, technical skills and awareness about the database are low in	There are various complaint registering platforms as part of this e-governance initiative	The legality of such systems remains debated since the country lacks a	Proactive governance discriminates between people who are in the government data

	villages (James James, Copestake & Sharma, 2019)		comprehensive set of data regulation laws. State surveillance is still a question to address	registry and who are out of it
SARAL & PPP, Haryana	The government failed to communicate the scheme and its functioning to the public (HIPA study, 2021)	People lack awareness about the Right to Service Act, Haryana (HIPA study, 2021)	Legality of such systems remains debated since the country lacks a comprehensive set of data regulation laws	By design, it discriminates between computer literate and illiterate. To avoid these, there are intermediary service centres which often exploit the beneficiaries
Samagra Vedika, Telangana	People do not know how the software functions. Intelligent technologies within this model are handled by an expert group	There are no authentic data relating to how people resolve their grievances if their claims are rejected	People were not consulted in any phase when 360 degree profile of residents was created	The software determines the eligibility of the claimants using the data that have been stored. However, the quality of the data is a question.At times, people were rejected benefits considering they had a house or vehicle but not taking the fact that they were rented or on loan. Technological inscribing by default creates new types of inequalities

various complaint redressal mechanisms within the system in Madhya Pradesh. In Haryana, a survey found that people rarely know how to address their concerns if they are grieved in any manner; and the majority are not aware of the Right to Service Act, Haryana (HIPA, 2021).

Privacy

Privacy and surveillance are important concerns that need to be addressed in the age of big data (Hillebrand & Hornuf, 2021). At foremost, this paper is concerned with the construction of databases by the state governments in India when a national-level data regulatory framework is non-existent in the country. Privacy concerns within technology range from surveillance to the question of informed consent (Pearce, 2021). However, privacy concerns at the societal level can be mainly understood from the frameworks of consent and the relationship between the data subjects with the data they produced. Citizens were not involved in the decision-making process of the Bhamashah scheme. There was no proper communication regarding the initiative, and thereby, around 70 per cent of the households enrolled out of fear of losing benefits (MicroSave, 2017). Thus the consent for data collection and integration is generated coercively (MicroSave, 2017). In the case of Samagra Vedika, it was claimed that the government was collecting and appropriating citizen data for creating 360-degree profiling without their consent (Sur, 2020). The scheme is said to be a platform that shares and cooperates with various governmental departments, from the welfare sector to the police.

Inclusion/Exclusion

Many studies within the Western context problematise the question of exclusion/inclusion by analysing the automated welfare systems and their social consequences in perpetuating, reinforcing, and introducing inequalities and injustices (Eubanks, 2018). In Rajasthan, there were news reports about cases where welfare benefits were stopped as the applicants did not have bhamashah cards. It sometimes took a year to get hold of the card. However, by the time the benefits scheme expires (Jain, 2018). The MicroSave study reports that the scheme was not successful in achieving women empowerment, as only 18 per cent of women mukhiyas handled the finances of the family. In most cases, male members conduct transactions on behalf of women members of the family (MicroSave, 2017). Various other provisions like those related to availing of maternity benefits, that is, monetary assistance for the birth of a girl child, are determined and inscribed into technology without a formal study. For instance, most times the residents are not able to keep the government-stipulated period between reporting pregnancy and registration of birth due to the existence of different customs in different parts of the state regarding childbirth; however, without following procedure, no benefits would be granted in the 'digital by default' order (Jain, 2018). Another important issue regarding Bhamashah was that the data collected and aggregated within BRDH were ridden with errors due to the large-scale enrolment drive that was finished within a short time (MicroSave, 2017). Software glitches accompanied this. By design, proactive governance discriminates between people in the government data registry and those out of it. Most of the time, it empowered Citizen Service Centres as a medium for all the people to government and government to people demands, support and supplies at a cost higher than fixed by the government (HIPA, 2021). Before implementing the Samagra Vedika software,

the government ran a pilot study in Hyderabad, which resulted in the cancellation of around 1 lakh ration cards. However, there was only the need to reject a few thousand of them (Rao, 2019).

Conclusion

There are several ongoing debates about the welfare sector in the country (Srivastava, 2008; Pawar, 2012; Duggirala & Kumar, 2021). These debates centre on various questions from charity to a rights-based approach, universal to targeted delivery and state delivery to market-driven delivery. However, the fact is that welfare is transforming with the introduction of smart technologies in the sector. This transformation influences the state-citizen relationship in myriad ways. When technological integration is done with the aims of efficiency and rights-based delivery in the country, a need arises to redefine the perceptions of 'being efficient' and 'having rights' in the context of machine-human interface. Efficiency cannot be simply defined as quickness and stopping of welfare leakages. It is mainly about achieving the intention behind welfare; it should ensure not a single eligible claimant is left out in the welfare allocation process. The meaning of rights-based delivery does not restrict the idea of recognition of welfare as the right of the citizens. It should also accompany the rights to know the allocation process, to be an active participant in the process, to redress the grievances in time etc.

The models discussed in the paper endure serious concerns. Different kinds of discrimination are perpetuated by these models, for instance, the divide between computer literate and those who are not and the divide between registered citizens and those who are not. Making enrolment into these schemes mandatory resulted in hardships for people to get enrolled on the one hand and survive with whatever little substance they have until their data are correctly fed and ID cards are issued on the other hand. While rejecting or stopping the benefits of the people, these platforms rarely notify the beneficiary of the reason behind the exclusion. People completely lack a picture of the process of welfare allocation. If they have any grievances, they do not know who should be held accountable for it, whether the technology or the bureaucracy/government. The huge data collection processes and integration takes place mainly without the consent of the residents. Also, these technologies are designed without a formal conceptualisation of the society and lives of people. Citizens are being reduced to nothing more than erroneous, typographically flawed statistics by the consequent governments.

In most cases, these models trespass the notions of privacy, transparency, accountability and inclusion. Thus, in the emerging digital welfare state, the comprehensive legal framework that governs data and tools that administer welfare is wanting. The robustness of the technology, along with the quality of data and bureaucratic efficiency, which are lacking in most cases, actually determine the success and failures of such initiatives. Automation of welfare shall be addressed very seriously because the social costs involved with the inefficient and uncritical implementation of automated welfare can be unpredictable in a country which is so diverse, deeply driven by different kinds of inequalities, and that is highly dependent on the state for nearly everything.

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