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Reviewing Aadhaar enabled governance in India

Introduction

The Digital India programme is a "flagship programme of the Government of India with a vision to transform India into a digitally empowered society and knowledge economy" (digitalindia.gov.in, 2017). A precursor to this initiative is the diffusion of mobile phones and rollout of biometric identity cards called Aadhaar (Gosh, 2017). Nandan Nilekani, co-founder of Infosys, asserts that Aadhaar based governance can provide unique form of identification to strengthen welfare initiatives by involving various startups and tech companies (Nilekani and Shah, 2015). Thus, we can see e-governance platforms in India emerging as arenas (Bakker, Van Lente and Meeus, 2011), where the state becomes an arena for the biometric infrastructure (Rao and Nair, 2019).

Public Distribution System (PDS), was introduced to combat acute poverty, issues of undernourishment and food shortage by providing food grains to beneficiaries (Swaminathan, 2010). However, food grains were illegally distributed to non-entitled customers through practices like black marketing, hoarding and diverting grains to private markets (Parikh, 1994). E-Public Distribution System (E-PDS), which evolved as an e-governance platform, is introduced to tackle such malpractices and corruption through surveillance (Masiero, 2014). But, practices of caste, class and gender hinder access and use of these technologies questioning the participation one has in availing these services (Kamath, 2018). Studies testing e-PDS reveal that with new challenges around using these technologies, people are still fighting for their rights (Masiero, 2014).

The aim of is to explore e-PDS system as an arena and infrastructure that enforce the adoption of biometric identification in welfare schemes. This is done by reviewing the history of biometric identity cards in India, critically analysing the e-PDS platform employed in India using theories from Science Technology and Society studies.

Findings

History of biometric identification in India

William James Herschel, a colonial civil servant introduced a workshop to defuse the technology of fingerprinting as a means of identification (Higgs, 2010). This workshop then lead to a coercive identity registration mechanism resulting in what is called a repository of fingerprint data (Breckenridge, 2014). It was also a practice in colonial India to hold a huge mass of population accountable, who were illiterate according to the colonisers, for tax fraud, revolts, and understand migration (Breckenridge, 2014). This practice popularised by Galton in the late nineteenth century emerged as a technique to properly classify fingerprints of human beings as a unique means of identifying known as biometric identifiers in modern times (Galton, 2015). Gandhi, while in South Africa was also a proponent of using fingerprint analysis citing its benefits for managerial and administrative purposes to detect fraud, a standpoint he took before moving on to be anti-progression (Breckenridge, 2011). Modern application of biometric identification for Indian citizen has taken the shape of a document called Aadhaar. With over 1.2 billion enrolments, Aadhaar uses biometric (facial photograph, fingerprint and iris scan data) and biographic details (address, gender, age and name) to identify an individual (Rao and Nair, 2019). Hence, various state institutions are employing the use of Aadhaar to identify beneficiaries, in an aim to tackle corruption. Such infrastructures employed by the state to solve the identification crisis by creating resolutions of citizen, where the markers (biometric and biographic) add resolution to the image of a citizen (Singh and Jackson, 2021).

Implementation of e-PDS

The E-PDS programme, deployed in 30 out of 33 states in India, has 23.5 core registered users, whose accounts have been seeded[1] to the central database (Government of India, 2021). The E-PDS programme goes by different names at different states; centrally it was known as E-PDS but got renamed to T-PDS (Targeted Public Distribution System) (digitalindia.gov.in, 2017). It's implementation has also been different across different states, where, states such as Kerala (started implementing in 2012) with high economic growth rate, high levels of literacy have been the early adopters and are aiming to deploy mobile phone based applications for the same (Maseiro, 2014).

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1   Seeding : Seeding is the process of entering user details into a centralised database registered against a users Aadhaar card.

Daman and Diu, is the latest state to deploy digital PDS and is currently completing the seeding of its user data (Government of India, 2021). Likewise, various states have different approaches to recognise and promote user engagement in the form of digital literacy (Maseiro, 2020). States like Kerala, fund and promote digital literacy classes to facilitate better participation in such systems (Ibid).

Even though the enrolment to E-PDS programs show an element of scale with respect to numbers, it does not capture how citizen get to participate in this new ecosystem. In order to participate in the digital E-PDS ecosystem, one requires access to not just an Aadhaar card and a ration card, but a functioning mobile phone with internet (Maseiro, 2014). A study of the e-PDS program deployed in Jharkhand highlights the challenges operating the system in rural India, where the internet connectivity is lower than that of urban areas (Menon, 2018). Very often, payments failed due to lack of stable internet connection and disruption of constant power supply further exacerbated this challenge (Ibid). Users are expected to have their mobile phone charged and in a position facilitating sufficient network to receive a one time passwords (Maseiro, 2014). Users are also required to have the same mobile number, which is linked to their Aadhaar, and bank account (Menon, 2018). This is a serious challenge as in the year 2009, during the introduction of the program, there were lesser mobile phones and users used mobile phone numbers of their kin groups to register (Jeffery and Doron, 2013). It means that one has to call their kin groups to receive the one time password, each time they attempt to procure food grains (Menon, 2018). Similarly, for some, the mobile numbers with which they registered is not in use any more. In such cases the users have to re-register, linking their mobile phones with all the institutions, linking all the necessary documents, during which their benefits will be suspended (Ibid).

Hence, to understand one's ease of participation in the E-PDS system, it is important to understand the various socio-cultural factors that shape their access and use. The question of whether one, or a group have access to digital technologies relates to the theoretical concept of digital divide. Proposed by LLoyd Morrisetti, digital divide refers to a gap or discrepancy in access to digital resources comprising information communication technology devices, due to socio-economic and political factors (Mila, 2001). While in-access due to cultural restrictions makes it social, and non-affordability makes it economical, state and societal/institutional control over internet and internet use can make it political (Gurumurthy, 2006). Feminist scholars further adds to it the perspective that the personal is political, which further questions the daily struggles one goes through to access such technologies as a result of deep rooted social constructs, institutional norms and practices (Kamath, 2018). With further diffusion of mobile phones and digital technologies, emerged questions regarding their onboarding, familiarity engaging with these technologies and the various standpoints of its use (Ibid). Theoretically, they can be categorised as theories pertaining to digital inclusivity and digital literacy. Scholars studying the various patterns of digital usage and inclusivity, identify these standpoints as different gradations in the spectrum of digital divide, instead of seeing it as a void in binary terms (Livingstone and Helsper, 2007; Deursan and Dijk, 2014).

With respect to e-PDS systems in India, inspired by the work around infrastructure by STS scholars and merging them with theories like "Seeing like a State[2] ," Singh and Jackson (2021) introduce the concept of "Seeing like an infrastructure". "Seeing like a state," highlights the various strategies employed by nation states, like surveys and statistics, to understand its citizen and govern them (Scott, 1998). These strategies also resonate with the discourses around bio-politics and power asserted by Foucault (1979). "Seeing like an infrastructure," identifies the penetration of information infrastructures in various aspects of bureaucracy, governance and public administration, thereby redefining the relation between the state, associated institutions of governance and citizen (Singh and Jackson, 2021). However, Taylor (2017), makes a distinction that such surveillance strategies differ from Foucault's concept of surveillance or panopticon, that is disciplining the body through one to one surveillance (1979). Taylor (2017), asserts that such interaction with automated and digital services makes one visible through their everyday interaction at various points, time and space. These interactions by citizen gets coded and recorded while they exercise their rights, which Rao and Nair (2019) define as coded citizenship. Rao and Nair (2019), asserts that this new form of citizen-state relation reduces citizen to machine-readable codes with an expectation that it can better aid welfare delivery and public administration. These theoretical understandings assert that infrastructures deployed by nation states and international organisations to solve the identification crisis creates resolutions or images of citizen, where their biological and biographic data adds resolution to their image as a citizen (Singh and Jackson, 2021).

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2   Seeing like a state: is a theory by Scott (1998) that asserts the scientific metrics deployed by governments in everyday aspects of life.

Conclusion

The concept of mediating and exercising citizenship through technologies, which in the colonial past was through fingerprinting and bureaucratic statistical records or documents, has now taken the shape of large information infrastructures. That is, systems that share and process large-scale information as well as coordinate diverse activities between geographically dispersed groups (Star and Ruhleder, 1996). These systems collect, store and emit data as a residue of everyday human engagement with technological devices and services (Taylor, 2017). Lyon (2007) argues that, data generated through everyday interaction in contemporary societies by these technological devices are subject to constant computer based scrutiny. Such systems make visible those who were earlier invisible to the state (Taylor, 2017).