Aadhaar: Uniquely Indian Dystopia?

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Introduction

On 28 January 2009, the Government of India constituted the Unique Identification Authority of India (UIDAI) through a Gazette notification. The main aim was to "generate and assign UID to residents", where UID refers to "Unique Identity". The brand name "Aadhaar" (meaning "foundation" in some Indian languages) and a logo followed. The Aadhaar project came to be seen as one of the flagship schemes of the second United Progressive Alliance (UPA-2) government (2009–2014).[1]

The idea behind Aadhaar was to provide each Indian resident a unique number, the uniqueness of which is guaranteed by biometric identification (and demographic details if need be). At the time of enrolment, people provide the following demographic information: name, gender, date of birth, parents' (or husband's) name, residential address and any other information that the government may prescribe (barring caste, religion and a few other sensitive attributes). They are also required to submit photographs, ten fingerprints and both iris scans. These are stored in the UIDAI's Central Identities Data Repository (CIDR). For the purpose of generating a unique number, the UIDAI does a one-on-n match, i.e., each new enrolee's details are matched against each existing person in the CIDR who has been issued a unique number. This is supposed to guarantee uniqueness.

In September 2010, the UIDAI began issuing Aadhaar numbers to Indian residents. With the impending threat of making Aadhaar compulsory for welfare programmes, and an incentive-based private agency led enrolment model, enrolment picked up quickly even though there was no legal framework guiding the project. The legal vacuum had serious consequences because a proper legal framework would have defined the rights of ordinary people vis-à-vis the state (e.g., give clarity about why their data was being collected and what they could do if it is compromised). Over 800 million Indian residents were enrolled by 2015.

Initially, Aadhaar was projected as a *voluntary* facility for all residents. Although in the UPA-2 years the use of Aadhaar spread rapidly, it was more or less confined to welfare applications. This changed dramatically in 2016 after the Aadhaar Act was passed. Since then, it has been made compulsory for many services. What started as a voluntary ID gradually became compulsory, and there is a danger of it becoming the *only* ID for certain uses. Compulsory Aadhaar is a very different thing from a voluntary Aadhaar.

This piece discusses some of the troubling questions – legal, technological, and related to its application – about the Aadhaar project, its implications for privacy, civil liberties, surveillance and tracking, and how this impinges on the functioning of a democracy. In doing so, the paper seeks to make connections with ongoing debates in other parts of the world – debates that arise from the growing influence of technology and technology companies.

Why Aadhaar?

Over the years, the UID project has reinvented itself – as a welfare-enhancing technocratic initiative, a project for financial inclusion, an administrative aid against terrorism and for better tax administration, and, most recently, as a big data opportunity. Some of these narratives are outlined below.

The welfare façade and technocratic tyranny in welfare

The most morally forceful framing of Aadhaar was as an enabler of welfare. Identity and inclusion were the twin objectives that proponents used to sell the idea to the Indian public. The early media blitz (in the national and international press) was focussed on the "transformational" potential of Aadhaar. The claim was that having an Aadhaar number would enable inclusion. Non-existent ("bogus", "duplicate", "ghost") beneficiaries were everywhere, according to this narrative, and Aadhaar, being centralized and unique, would sanitize beneficiary databases. By ensuring "inclusivity" and corruption-free implementation, it would be a "game-changer" for welfare in India. Early on, this understanding of the problems in welfare administration was shown to be flawed (Khera 2011), yet over time Aadhaar became de facto compulsory for accessing welfare benefits.

There is plenty of evidence (including in the government's own data) of the problems associated with the application of Aadhaar in welfare. What is brushed aside as teething problems or rare implementation is-

sues are routine – not rare – occurrences: people have been shut out of their pensions, Public Distribution System (PDS) rations, hospital services, savings, and mobile connections, etc. In the poor state of Jharkhand alone, the use of Aadhaar has been made compulsory in the PDS and has resulted in the deaths of over twenty people after they were denied PDS rations due to Aadhaar-related failures (Khera 2019a).

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Earlier, to get any social benefits, people needed to meet the eligibility criteria for the scheme in question. There were many hurdles along the way: learning about the existence of such schemes, figuring out eligibility criteria, running from pillar to post to understand application procedures, and the required supporting documents, etc. What Aadhaar has done is to add a few new hurdles at the finishing line, pushing it further out of people's reach.

The first new hurdle is getting an Aadhaar number. While it is true that only a tiny fraction now do not have Aadhaar, this can add up to a large number and can concern those who are the most in need of state support. For instance, in December 2017 I met Kapil and Savitri Paikra in Surguja (Chhattisgarh). Kapil Paikra has been bedridden since 2009 after a bad road accident. His PDS rations have been discontinued as he has not submitted his Aadhaar number. He has never been able to enrol for Aadhaar because he has been bedridden since before Aadhaar was launched. Savitri asked, "Can I carry his bed to the Aadhaar enrolment centre?"

The second new hurdle is linking the Aadhaar number with each new scheme for which it is made compulsory. This is not as small a demand as it seems: a single trip can be cumbersome for the elderly; in many cases, the task cannot be accomplished in one trip. In 2011, in Ranchi District, an old man was being forced to open a new bank account because the government wanted to route his pension to an Aadhaar-linked bank account instead of the local post office. The otherwise helpful banking correspondent had to turn him away because one key document was missing. A few minutes later, we saw the man squatting by the roadside on the road home, which was about a kilometre away. When we asked why, he said he couldn't walk any further – he was too exhausted from the excursion. In 2013, in East Godavari, the "pioneer" district in linking the PDS to Aadhaar, I met Jyothi, a young Dalit mother of twins. For some reason, which nobody was able to explain to her, the new system would no longer allow her to draw her rations. She broke down as she described the condition of her hungry twins.

The third hurdle is Aadhaar authentication when people are drawing their benefits. This fails for a variety of reasons – connectivity issues, electricity supplies, biometric authentication failures, etc. Authentication by the beneficiary in person means that people like Olasi Hansda, who lives alone and has limited mobility, are simply excluded, despite possessing all documents, including Aadhaar. For others it means increased transaction costs in terms of repeated visits, longer waiting times, etc.

Enabling financial inclusion

There are many barriers to financial inclusion in India – lack of documents for Know Your Customer (KYC), limited reach of the banking system, costs of servicing new customers, etc.[2] The lack of KYC documents was singled out as the main cause of financial exclusion, and Aadhaar was again projected as the *only* – and best – way forward.[3] Combined with "banking correspondents" who would act as extension counters of banks in areas where regular bank branches were not financially viable, this was another way in which Aadhaar was supposed to improve financial inclusion. According to the World Bank data on financial inclusion, between 2014 and 2017 the proportion of those aged 15 years and above who had an account rose from 53% to 79%. Almost half (23% in 2014 and 38.5% in 2017) had made no deposit or withdrawal in the past year. It is hard to tell from the available data whether this improvement is on account of Aadhaar, or the result of other government and RBI initiatives, or simply a function of time, or (most likely) the combined result of all these factors. Another potential contribution of Aadhaar is a reduction in the cost of acquiring new customers.

Some felt that Aadhaar would facilitate a transition to cash transfers (in lieu of in-kind transfers). Cash was viewed as a better option as it is believed to be less prone to corruption.[4] Though cash was not explicitly pushed by the UIDAI, the early welfare claims and Nilekani's 2008 book (*Imagining India*) betrayed some indications of this. For instance, "interoperability" and "portability" (i.e., welfare benefits that can be claimed anywhere, especially important for migrants) were projected as desirable and only possible within the Aadhaar eco-system. Aadhaar, it was claimed, would eliminate intermediaries and thus corruption also.

Digital IDs and personal data mining

Internationally, the role of digital IDs for growth and development has been stressed considerably in recent

years. According to the World Bank, "Lack of identity is an impediment for poor people to exercise their basic democratic and human rights … Digital identification can help overcome barriers to participation" (World Bank 2016). The narrative that was pushed in India mirrors the international rhetoric: millions of Indians are without IDs; more often than not, these happen to be the poor, whose lack of an ID deprives them of access to government services, and a new ID such as Aadhaar is therefore necessary.

No doubt IDs play a facilitating role in many ways, but it is worth bearing in mind that many countries without a national ID continue to provide good public services. A cursory look around the world suggests that national IDs are neither a necessary nor sufficient condition "for poor people to exercise their basic democratic and human rights". The United Kingdom (UK) is a useful example. It does not have a national ID (not even paper-based), and its proposed biometric "Identity Project" was ultimately abandoned. There are many parallels between the UK's Identity Project and the Aadhaar project in India, e.g., how the case for such an ID was over-sold, the scale of the problems that it could solve were exaggerated, the costs and technological issues were understated, and so on. Eventually, timely public debate ensured that the project was scrapped.[5]

The proponents of Aadhaar regularly refer to it as the equivalent of the Social Security Number (SSN) in the United States. To the extent that Aadhaar *is* like the SSN, it is worth recalling that the latter played a crucial role in helping to build credit histories of individuals, which in turn is associated with the rise of the credit and insurance industries. Both these industries have a chequered history of exploiting personal information for profiteering (O'Neil 2016).

Since 2016–17 there has been a concerted and single-minded focus on linking Aadhaar – the practice of storing the number permanently – in public and private databases. From cradle to grave, the government wants people to leave their digital footprint in every database. This opens the door for profiling of individuals – by state and non-state actors. Most recently, the Aadhaar project is revealing itself to be a mega data mining project. In the words of its promoter, Nilekani, "Data is the new oil", and as someone on Twitter put it, "and Aadhaar is the drill to get it".

Big data meets big brother: a surveillance infrastructure

The Aadhaar project is a privacy hazard from several angles (discussed below) – data security, bodily integrity due to the use of biometrics, personal integrity and personal data mining. While *any* centralized database creates data security vulnerability, a unique number ("key") such as Aadhaar linking all the data silos, *magnifies* those vulnerabilities. Of course, this is precisely what creates massive commercial possibilities from personal data mining – information on the nature and frequency of travel, who we meet or talk to, what we eat or buy, and so on – has great value for targeted advertising and other decision-making algorithms that are being used in more and more spheres.

The trajectory of the Aadhaar project – from voluntary to compulsory, from limited to unlimited use – raises serious questions for civil liberties and democratic practice. By linking all aspects of our lives (air and train travel, bank transactions, mobile usage, employment and health records, etc.), it is creating a mass surveillance infrastructure which facilitates tracking and profiling of ordinary citizens. Profiling and surveillance are known to lead to self-censorship (Greenwald 2015). Self-censorship of thought and actions severely hampers free thought and expression. The mining of personal data thus clashes in a fundamental way with civil liberties, a clash that lies at the heart of the Aadhaar debate.

The spectre of surveillance has generally been evoked in the context of government surveillance. The fact of, and dangers from, corporate surveillance are now beginning to emerge in the public debate (Schneier 2015, Zuboff, 2019, Khera 2019b). Corporate surveillance refers to the use of personal data for the purposes of targeted advertising and, as the revelations by Christopher Wylie in early 2018 about Facebook and Cambridge Analytica show, even in manipulating elections.

The proliferation in the compulsory applications of Aadhaar since 2016 creates the opportunity for both types of surveillance. When the same number is stored permanently in numerous databases in the country, tracking people and creating profiles of people by pulling in data from different sources becomes easier than ever before. Where and how I travel (by air or train), what I spend my money on (books, or clothes, or food), who I meet or talk to, etc., all this information can be pooled together to create a profile of me, to target products on the one hand, and to red-flag me on the other. In the world of algorithmic decision-making, frequent trips to rural Jharkhand are equally likely to be classified as those of a field researcher as they are as those of a Naxal supporter.[6]

The government asserts that since UIDAI itself collects and keeps very little information, the question of profiling, tracking and surveillance does not arise. Private entities, however, easily hand over our data to government agencies (e.g., mobile companies to the National Security Agency in the US, Google to governments requesting data on its users and so on) (Schneier 2015). Further, as the Aadhaar number is linked with

numerous databases, including many government ones, it is very easy for the government to pull in information from various sources. Another defence that the government puts forward is that metadata (which is what UIDAI primarily deals in) alone prevents collation of an individual's data from different sources. Again, they hide the fact that metadata can reveal a lot (for instance, information on the most frequently called number is as revealing as information on what the conversations were about). Further, data mining techniques are now sophisticated enough to match individuals across databases with greater accuracy, even when they were originally anonymized metadata (Narayanan and Schmatikov 2008). Having a unique identifier across databases will make that task much easier.

Traditionally, personal data mining techniques have been used for targeted advertising. Each click, or even hovering the mouse, allows tracking and analysis to understand preferences and needs and is sold to companies to enable "targeted" advertising. Data brokers facilitate such practices. "Predatory lending" thrives on it. For instance, ICICI bank functionaries sold insurance policies to unsuspecting customers, such as poor National Rural Employment Guarantee Act (NREGA) workers, Kisan Credit card holders, who it was clear would not be able to pay the premiums. Applications that correlate behaviour of individuals across data silos will create business opportunities in credit-rating, health insurance, even marriages, and blue-collar and other hiring, to name just a few.

The new avatar of targeted advertising is "digital kleptocracy", which is authoritarian as well (Kaiser 2018). Digital kleptocracy is a means by which rich tech companies mine poor people's data (steal them, in fact: in most cases the person is unaware of their data being harvested and used) for profit. As Nilekani himself put it, "The business models that will emerge in India will … allow people to take their digital wealth and convert that into economic wealth, and that is the trickle-up." (Rai 2017). However, it is not necessarily a benign process. It can be toxic. Often, data are harvested and shared without our consent or knowledge (e.g., CCTVs or web browsing histories). When our data are used by opaque algorithms to make crucial decisions about our lives (e.g., shortlisting for jobs, getting health insurance, whether we were speeding), we cannot question these decisions (Khera 2019b).

Big data, big deal?

Much of the optimism around digital IDs such as Aadhaar stems from a rose-tinted view of what possibilities big data opens up with ever-improving data mining techniques. Recent years have seen significant scholarship and events which should lead to a re-evaluation of how these possibilities are viewed. Social scientists have questioned the epistemological claims made by the big data advocates and arrive at the following sobering conclusion: such analysis can be reductionist, functionalist, and when it is context-free, anaemic and unhelpful (Kitchen 2014). Brooks (2013) cited in Kitchen (2014 9) contends that big data "struggles with the social …, struggles with context …, creates bigger haystacks …; has trouble addressing big problems; favours memes over masterpieces …; and obscures values." Ethical concerns have been raised and are beginning to be addressed.[7]

The existing literature helps make sense of the Aadhaar project. However, there are some uniquely Indian problems which have not been adequately emphasized. This section provides a brief overview of how Aadhaar relates to some of the debates around the themes of computing, law, privacy, technology and welfare.

Technology in governance: its promise and failings

Writing about the use of technology in welfare administration in the US, Eubanks (2018) proposes that as rights began to be enshrined in law and political will teetered, the response was to "unleash" technology to contain rising costs. Serious questions have arisen about biometrics (how reliable and secure they are). In the push for using biometrics in welfare, the similarity between India and the US is striking. Magnet (2011, 77–83) shows how the incidence of "duplicate-aid fraud" was exaggerated in order to expand the market for products of the biometrics industry. When no substantial savings could be established, savings estimates were manufactured. For instance, any reduction in the number of welfare recipients – even due to other reasons – was attributed to the use of biometrics. Both these problems – exaggerating the incidence of duplicate-aid fraud (the only form of fraud that biometrics can potentially resolve) and fabricated savings due to the use of biometrics – have been documented in the Indian case as well (Khera 2017).

While Eubanks' (2018) and Magnet's (2011) work highlights how the axe falls primarily on the poor, in the Indian case the resulting disruption has resulted in tens of deaths, apart from other hardship. There is a question of technological readiness in India. For certain services, the government proposes to use Aadhaar to biometrically authenticate each time a service is used (e.g., purchase of subsidized grains each month). In a country where electricity supply is erratic, as is mobile and server connectivity, the wisdom and economics of such a move need to be considered. Fur-

ther, there are anxieties related to the appropriateness of making such technologies ubiquitous and compulsory. The Aadhaar "eco-system" demands high digital, technological and legal literacy. Yet it is being foisted on a society with low levels of literacy (according to the 2011 census nearly 30% of the population was not literate). This is irresponsible and undemocratic.

Moreover, the architects of Aadhaar envisaged that those who use this technology will use it in benign ways and remedy corrupt practices in existing systems (caused by corrupt intermediaries). Why those who mediate the Aadhaar technology would be any more or less honest than other government intermediaries, is a question no one asked.

Large-scale fraud at the enrolment stage has been highlighted in several cases (the government reported to Parliament that 49,000 enrolment agencies were blacklisted due to malpractices). As people link their mobiles and bank accounts, fraud at the user stage has come to the fore (Bhardwaj 2017; Mukherjee 2017). Hindustan Times reported that 200 students in Mumbai replicated their fingerprints on a widely used resin to fudge biometric attendance (Qazi 2017). Easy harvesting of biometric traits and publicly available Aadhaar numbers increase the risk of banking fraud (Brandom 2016; Kazmin 2017).

Civil liberties and the right to privacy

From the field of computer science, too, there are warnings. Data security expert Bruce Schneier (2015) warns of the harmful consequences (mass corporate and government surveillance go hand in hand with such an explosion of data, as it is used for consumer manipulation as much as it is for increasing consumer welfare). The emergence of data gathering on such a massive scale can be traced to the needs of advertising (Solove 2001), but the incremental value of more data for targeted advertising is suspect (Schneier 2015, 64–66). Other important work highlights the dangers to privacy, and related issues such as lack of informed consent in any meaningful way, in the data harvesting practices (Narayanan 2009). boyd and Crawford (2012) raise six fundamental questions in the age of big data: whether it changes the definition of knowledge, whether its claims to objectivity and accuracy are valid, whether big data is always better data, whether it loses meaning when it is not contextualized, whether accessibility can be equated with being ethical, and whether differential access to big data creates new inequalities.

In early 2018 we saw the revelations from Canadian whistle-blower Christopher Wylie about how our personal data was mined by Facebook and Cambridge Analytica. The episode demonstrated that once we create a digital footprint, we are no longer able to prevent its misuse and abuse. This is partly because consent is either inadequately built in, where it is built in it is poorly understood, or sometimes even when it exists and is exercised there can still be violations. This, along with the Snowden revelations that came before it, has opened the world's eyes to the dangers of data mining, machine learning (ML) and artificial intelligence (AI). In the past months, the integration of voter IDs – actual and planned – with Aadhaar leading to disenfranchisement has been reported. Fears of their integration with other data to profile voters were also voiced by political parties in the southern states of Andhra Pradesh and Telangana (Kodali 2019).

Law-making is compromised and the rule of law is weak. Remedy in case of violations, even when laws are adequately protective of people's rights, is an onerous task. The illegal display of Aadhaar numbers on government portals or the sale of demographic data that were available for Rs. 500 in Punjab were violations of the law for which no real remedial action was taken by the government. The main challenge to the Aadhaar project in the Supreme Court was on the grounds that it violates the right to privacy. The Government of India argued, wrongly, that whether the right to privacy was a fundamental right was an unsettled question in Indian jurisprudence (Bhatia 2017). In August 2017, a nine-judge bench was constituted to deliberate on whether the right to privacy is a fundamental right. That bench delivered a unanimous and path-breaking judgment in favour of the petitioners, with implications not just for the Aadhaar case but also other matters. The judgment is important as it deepens our understanding of the meaning of privacy especially in the digital age.

Until 2016, the main sections of the population to be hurt by Aadhaar were easily neglected beneficiaries of social support. From 2016, however, the government began to make Aadhaar compulsory almost everywhere, and private sector firms also began demanding it. Thus, the better-off began to grapple with Aadhaar's substandard eco-system – misspelt names, wrongly linked numbers, incorrect dates of birth, deactivation of numbers, demands to re-register biometrics, lack of accountability, etc. (Khera 2019a). Even the damage to welfare from Aadhaar has begun to be understood more widely. This has been possible partly because independent studies have documented the damage from the coercive use of Aadhaar in welfare (Chhatre and Bhardwaj 2019; Drèze et al. 2017; Malhotra and Somanchi 2018; Nayak and Nehra 2017; Somanchi, Bej and Pandey 2017).

By 2018, when the final hearings in the Aadhaar matter began, the public mood with respect to Aadhaar had shifted. The government found it tough to

make the case that Aadhaar is essential for welfare, one of its key arguments post the right to privacy judgment. An oft-repeated line by the government, in its defence of Aadhaar, was that it plays an important role in ensuring the right to life and rights under Article 21 of the Constitution. In the final hearings, the Attorney General's main line of defence was that the Court must "balance" the right to life of millions, which he claims is guaranteed by Aadhaar, with the right to privacy. It was perhaps the first time, even inadvertently, that the government acknowledged that the right to privacy is compromised by the Aadhaar project.[8]

Even if one were to grant (for the sake of argument) that Aadhaar played an enabling role in delivering welfare and therefore a trade-off existed between the two rights (to life and to privacy), Justice DY Chandrachud's privacy judgment in 2017 rejected that proposition outright: "Civil and political rights and socio-economic rights do not exist in a state of antagonism." In fact, he stated that the idea that one is "subservient" to the other "has been urged in the past and has been categorically rejected."

Solove (2001) argues that the privacy problem that arises with databases is inadequately captured by Orwell's "Big Brother" metaphor, where "privacy is invaded by uncovering one's hidden world", leading to "inhibition, self-censorship, embarrassment, and damage to one's reputation". He argues that a more accurate metaphor is "The Trial" by Kafka, which characterizes the problem as "the powerlessness, vulnerability and dehumanization created by the assembly of personal information". In the realm of welfare, the anecdotes amply demonstrate how the use of Aadhaar in welfare has disempowered the poor, leaving them at the mercy of centralized and invisible levers of control.

Industry hype and the role of propaganda

The hype surrounding the virtues of big data, ML and AI is second to none. It has been projected as revolutionary for both private profits and social benefits. Big data proponents proclaim the "end of theory", making "scientific method obsolete" (Anderson 2008 quoted in Kitchin 2014, 3), a method that is free of human bias. Does the economic potential of big data justify the social and political costs? Is the economic potential really as revolutionary as it is made out to be? It appears not.

At least some of the hype around big data is industry-driven. Metcalf, Keller and boyd (2014, 5) say that industry hype "frames big data as a new service that can be sold off the shelf", and other theorists have identified big data with the "end of theory" and the rise of hypothesis-free science". Kitchin (2014) also suggests that business interest is an important driver of big data, where business is "preoccupied with employing data analytics to identify new products, markets and opportunities rather than advance knowledge per se".[9]

Some industry insiders, too, people who have used big data, are walking away disillusioned. An illuminating example of this is Cathy O'Neil's "*Weapons of Math Destruction*". Even with the best of intentions, algorithms can get it wrong, but the opacity of algorithms enhances their power (O'Neil 2016). Assumptions, based on flimsy evidence, get hard-wired into algorithms. Not only are the algorithms suspect, the data they process can be bad too. "Garbage in, Garbage out" is a recurring theme in O'Neil's work. Worse, she suggests (reaffirming Schneier's concerns), there is some evidence that they can be intentionally misused or abused.

Even in the mainstream, there have been calls for caution. The Economist's views are an important example of this. Writing about an upbeat industry report on big data in 2011, it observes that "Big data has the same problems as small data, but bigger. Data-heads frequently allow the beauty of their mathematical models to obscure the unreliability of the numbers they feed into them (Garbage in, garbage out.)" (The Economist 2011).[10] By 2016, The Economist was writing about "fads" and a "herd" tendency among economists, that "fashions and fads are distorting economics, by nudging the profession towards asking particular questions, and hiding bigger ones from view." (The Economist 2016). In India, newspapers have reported entire villages enrolled with the same date of birth (Mani 2017), or the enrolment of dogs (PTI 2015), vegetables (Dharur 2012) and gods (PTI 2014). Data errors and fraud enrolments have serious consequences for those concerned as Aadhaar becomes compulsory in banking and for other day-to-day activities. For instance, a big mess that is attributable to data errors in Aadhaar may be underway in banking (Drèze 2018; Dhorajiwala, Drèze and Wagner 2019).

It is not possible to understand the progress of a project such as Aadhaar in a country with all the checks and balances that are present in a democracy – an independent judiciary, free press, elected representatives – without focussing on the propaganda around it. It is a study in how propaganda comes to the aid of industry interests, helps in manufacturing elite consensus to mute any possible challenges. (see Khera 2019c). On the one hand, propaganda helps to foster techno-utopic visions of society, and on the other it helps to supress inconvenient facts and developments.

These alarming developments included undermining parliamentary processes. For instance, the Parliamentary committee rejected the first draft of the National Identification Authority of India Bill, 2010, yet in 2016 a bill was brought that did not address the concerns laid out in the committee's report. Further,

the bill was brought as a "Money Bill", which allowed the government of the day to bypass the upper house of Parliament (Achary, 2015, Parthasarathy 2017). Judicial authority was also routinely challenged, e.g., the interim orders issued by the Supreme Court between 2013 and 2017 were regularly violated, and no contempt notice was issued by the Supreme Court. After the judgment, too, the government has brought amendments which go against what the Court had ruled. For instance, the Court had struck down access for private entities to Aadhaar, but that has been brought back through an amendment in Parliament (Khera 2019d).

Nilekani, who was charged with the rollout of the project, was well aware of the possibility of resistance to the project if a fair debate was allowed. When asked about his strategy to deal with the "opposition" to Aadhaar, he made the startling revelations that they employed three strategies: "do it quickly" (i.e., don't give people time to comprehend the implications of the project), "do it below the radar", and "create a coalition that wants Aadhaar" (outsiders who bat for the project). The strategy was to make it big swiftly, so that rollback would seem impossible. Advertisements, branding, labelling, damage control, planting stories, manipulating headlines, sponsored research were the strategies that were used. The most telling example of this is the almost entirely fabricated "potential savings" due to Aadhaar put out in a World Bank report (Drèze and Khera 2018). As a result of the concerted media strategy of the UIDAI since its inception, the favourable impression in people's minds is hard to dislodge, in spite of the growing evidence of exclusion, denial and hardship.

The aspect of the co-optation of the government by industry interests has not been explored adequately – either internationally or in India. In the case of Aadhaar, these commercial interests as well as the conflict-of-interest issues with the project are only just beginning to be documented (Kaushik 2016; Thaker 2018). Some business interests petitioned the Supreme Court in 2018, pleading that the Aadhaar project be kept alive to guard their businesses' interests (the petitioners were asking for the project to be shut down entirely). An important illustration of conflict of interest is the role of the Vidhi Centre for Legal Policy (VCLP) in the Aadhaar matter. Set up as a legal think tank to aid the government on legal issues, VCLP describes itself as "independent". It is, however, funded by large corporate philanthropists and earns revenues from government (e.g., it helped draft the controversial Aadhaar Act, appeared in the Supreme Court on behalf of the government to argue *against* the right to privacy as a fundamental right, and so on). What it is "independent" of is not entirely clear.

The Indian experience may have some lessons for other countries. For instance, the Jamaican court used the dissenting opinion in the Aadhaar case to strike down a similar project in that country. In Kenya, the trajectory of Huduma Namba (a biometric ID project like Aadhaar) so far mirrors what happened in India with Aadhaar (from voluntary to mandatory, an appeal to improving welfare administration, etc.). Apart from Pakistan and Estonia, which already have national biometric IDs, China's social credit system, several African countries (Liberia and Morocco, among others) are also going down this path, with active support from the World Bank and philanthropies such as Omidyar Network and the Bill and Melinda Gates Foundation. There is a genuine concern that social, political and economic rights might be undermined by these technologies. The interest of governments, corporations and philanthropies in aggressively promoting such projects needs urgent attention.

Endnotes

This paper draws on the author's book *Dissent on Aadhaar: Big Data Meets Big Brother*.

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1 Nandan Nilekani was appointed as the Chairperson of the UIDAI, and Aadhaar is widely perceived as his brainchild. See Parker (2011) for details.

2 Know Your Customer (KYC) is a requirement for opening bank accounts, the first step towards having access to the formal banking sector. See Sriram (2014) and Sriram (2019).

3 The Reserve Bank of India (RBI) and the Indian government have taken various measures to increase access to the formal banking system. These measures included the opening of "basic saving bank deposit" (also known as "no frills") accounts, simplification and relaxation of KYC norms, etc. For instance, in 2008–9 the Ministry of Rural Development (MoRD) decreed that NREGA wage payments could only be made through bank accounts and NREGA "job cards" were declared adequate KYC for opening no-frills or zero-balance accounts.

4 India has "in-kind transfers" such as subsidized grain through the Public Distribution System (PDS) or free school meals for pre-school and school children, as well as cash transfers (e.g., social security pensions).

5 There are other examples of such ID projects being initially heralded as transformative and revolutionary but eventually

being scrapped – Australia's anti ID-card campaign in 1987 is legendary (Davies 1996).

6 Naxal refers to communist revolutionaries, who believe in armed struggle.

7 These techniques have begun to catch the imagination of economists, but here too the caveats are hidden by the hype. For instance, as a user of big data, Hal Varian (Google's Chief Economist) cautions: "As with any other statistical procedure, skill, experience and intuition are helpful in coming up with a good answer. Diagnostics, exploration and experimentation are just as useful with these methods as with regression techniques" (Varian, 2014).

8 The government was forced to cede some ground. It shared the high rates of biometric failure and exclusion resulting from such failures with the Court. The lawyer for UIDAI pleaded that the Court "should be like a doctor saving the patient", clearly admitting that there was something wrong with the Aadhaar project.

9 Kitchin's discussion juxtaposes business with academia. However, what is at stake with the current conception of the Aadhaar project is the need of corporations and the state's desire to increase its own power on the one hand, and social or political aspirations of ordinary people on the other.

10 Another article headlined "The Backlash Against Big Data" went further. It began thus: "'BOLLOCKS', says a Cambridge professor. 'Hubris,' write researchers at Harvard. 'Big data is bullshit,' proclaims Obama's re-election chief number-cruncher." (The Economist 2014)

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