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Payal Arora

Benign dataveillance — the new kind of democracy? Examining the emerging datafied governance systems in India and China

Universität Bremen*

ZeMKI Zentrum für Medien-, Kommunikations- und Informationsforschung

Universität Hamburg

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Universität Bremen | University of Bremen
ZeMKI, Zentrum für Medien-, Kommunikations- und Informationsforschung
Linzer Str. 4, 28359 Bremen, Germany, E-mail: zemki@uni-bremen.de
www.kommunikative-figurationen.de | www.communicative-figurations.org

Payl Arora (arora@eshcc.eur.nl)
Payal Arora is an Associate Professor at Erasmus University Rotterdam and Founder and Executive Director of Catalyst Lab, a center that ignites relations between academia, business and the public on matters of social concern. In 2018, she was a ZeMKI Visiting Research Fellow at the University of Bremen. Her research challenges normative understandings of the impact of new technologies on the world's marginalized communities. She has published over fifty papers in the last decade on poverty and technology, researching digital practice in the favelas in Brazil, slums in India to the ghettos in the Bronx in New York. She has authored books on this subject including the award-winning Leisure Commons: A spatial history of Web 2.0, Dot Com Mantra: Social Computing in the Central Himalayas, Crossroads in New media, Identity and Law, and the upcoming book The Next Billion Users: Digital life beyond the West with Harvard University Press. She has given more than 130 talks in 76 cities in 30 countries. Arora sits on several boards including the Columbia University's Earth Institute Connect to Learn, the Technology, Knowledge & Society Association, and the World Women Global Council in New York. She was a Fellow at GE, ITSRio and NYU.

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1 Introduction

Democracy is not just an ideal but also an aspiration for a just system of governance, and a model of what a 'good' society looks like. Democracy at its most basic is the rule of the majority, the rule of the commoners, and it was the most successful political idea of the 20th century (Ball, Dagger, & O'Neill, 2016). However, democracy as we know it is under serious threat. The political climate today reveals how the old champions and power centers of the West such as the United Kingdom and the United States are moving towards non-inclusive and even discriminatory social policies, defying the packaged dream called democracy (Inglehart & Norris, 2016). What we see in the last decade is entrenched oligarchy in this region that has resulted in what Thomas Piketty has shown us is an astonishing widening of social and economic inequality (Piketty, 2014). As these nations become inward looking, nostalgic of a fictional monochromatic past of a non-diverse state, nations beyond the West have gained credence in promoting alternative models of governance for the common good. This paper examines two new models emerging from the Global South, specifically India and China, enabled by new digital technologies.

The first model, the Biometric Identity initiative known as the Aadhaar or the Unique Identification Number (UID) project in India is an ambitious and historically unprecedented databased model of governance. Major news outlets such as the BBC endorse this effort as they report how the poor, "with no proof to offer of their existence will leapfrog into a national online system, another global first, where their identities can be validated anytime anywhere in a few seconds" (Arora, 2016b, p. 1684). The goal of the project is to provide a unique identification number to each of the 1.2 billion Indian citizens through the capturing of their fingerprints, iris scans, and photographs. This consolidated digital identity will serve as a primary portal through which citizens can gain access to all social services such as welfare, banking and food subsidies for those at the margins of society. It aims to bring all of the undocumented poor into the system.

R. S. Sharma, the secretary of the Department of Electronics & Information Technology in India declared that, "digital India is not for rich people [...] it is for poor people" (Arora, 2016b, p. 1685). There is some truth to this claim. It is a fact that majority of India's citizens lack any form of identity such as a passport or a resident permit, making it difficult to disseminate welfare benefits to the masses. Intermediaries have capitalized on this by using fake identities to siphon off much of the 60 billion dollars in welfare benefits earmarked for the poor (Arora, Forthcoming b). It is no wonder that this project stands as a contemporary crusader against corruption. However, numerous challenges inundate this process including privacy and human rights violations, duplications and weak institutional measures against data breaches.

The second governance model from China has a vision of a good society and a good citizen and is in the midst of creating a unified digital system to foster this vision. By 2020, China intends to institute the Social Credit System (Shahin & Zheng, 2018). By combining the citizens' financial records, online shopping data, social media behavior and employment history, the system will produce a 'social credit' score for each citizen. This rating system will be used to measure the citizens' trustworthiness. Each citizen will earn 'credit' through good behavior enacted online and offline. This will directly affect their access to all kinds of public services including the nation's financial credit system. In essence, it is a value-embedded system meant to encourage good behavior and discourage bad behavior. This system can get punitive as the scanning of social media accounts can sentence people to unemployment, slow Internet connectivity, and travel visa bans based on non-compliance to the party's rules and values (Markey, 2016). Technology companies that do not comply with the party's ethics could be extensively fined for supporting so-called immoral and indecent content.

By looking at democracy's three core dimensions - the socio-political, the economic and the legal, and how big data intersects with them, this study analyzes the following questions in the context of India and China: *does digitization of citizen data reduce or entrench inequality in representation and participation? Are these computing systems enabling a more level playing field by helping citizens leapfrog their economic status and circumvent traditional intermediaries of power? To what degree does this datafication ensure citizen's rights?* This paper reveals a complex narrative that goes beyond the Western conceptualization of democracy, and provokes a re-examining of this concept as governance becomes increasingly impacted by the automating of decision-making. By juxtaposing these emerging databased systems against the normative Western model, this study reveals the crossroads we are at when it comes to what constitutes as social inclusion, free market participation, and citizen rights in this digital and global age.

2 Democracy and governance in this datafication era

The world is experiencing a regression in democracy. According to the Democracy Index from The Economist Intelligence Unit, 89 countries regressed in 2017 ("Democracy Index 2017," n.d.). The latest Transformation Index from the Bertelsmann Foundation, another think-tank, which focuses on emerging economies concluded in their report that, the "quality of democracy…has fallen to its lowest level in 12 years" ("BTI 2018 - Transformation Index," n.d.). These metrics are dictated by liberal democratic values that emphasize a freely elected government, strong individual and minority rights, the rule of law and the independence of institutions ("After decades of triumph, democracy is losing ground - In retreat," 2018).

In recent years we have seen a separation of liberalism and democracy with the rise of populist driven referendums, the suppression of the press, the curtailing of minority rights, and the voting in of strongmen who promise to exercise their authority for national governance. A 2017 Pew poll of 38 countries found that a significant minority group approved of non-democratic alternatives; 24 percent were fine with military rule and 26 percent found the idea of "a strong leader" who "can make decisions without interference from parliament or the courts" appealing (Wike, Simmons, Stokes, & Fetterolf, 2017).

This begs the question: is democracy as we know it under threat? Alternatively, should we be re-questioning the parameters of democracy to better comprehend this contemporary conundrum? At the turn of the century, democracy supplanted Marxism as the prevailing global ideology with multilateral organizations jumping on board to endorse its principles. Today, its position is less secure. Plattner (2015) embarked on assessing whether democracy was declining by looking closely at its legitimacy and attractiveness among the people. The quality of governance appears to be at the forefront in this discussion as citizens who are new to this ideology remain unconvinced of democracy's capacity to build the modern state. Fukuyama contends that, "the legitimacy of many democracies around the world depends less on the deepening of their democratic institutions than on their ability to provide high-quality governance" (Fukuyama, 2015, p. 14). He calls for an attending to the more prosaic aspects of state-building such as public administration and policy implementation in these so called democracy systems.

Part of this has to do with the rise of China's power in the geopolitical sphere, offering other developing countries an alternative ideology and governance structure to the prescribed democratic template of the United States and Europe. In the last decade alone, China has embarked on numerous social reforms that has brought five hundred million of their citizens out of poverty (Wu, 2016). Their positioning has been amplified by the fact that India, the world's largest democracy, did not rise to the global expectations in economic growth and welfare of their citizens (Banerjee, 2013). Not surprising was the election of Narendra Modi as Prime Minister, the strongman of India, who has taken inspiration from the Chinese style governance to chalk a future model of statehood (Chacko & Jayasuriya, 2017).

Both nations are currently reconfiguring their governance by leveraging on the affordances of new digital technologies and their citizen's heightened enthusiasm and even faith in such systems. Today, these nations have more mobile users than the rest of the world combined, in spite of the fact that only a fraction of their citizens have gained internet access (Statista, 2018). They both promise their citizens an improved life by using centralized databased systems to redistribute resources fairly and efficiently, to empower them to compete in the marketplace and to keep them secure.

These measures can arguably build trust among their constituents, a fundamental characteristic to foster a democratic society. As pointed out by Uslaner, "societies don't become trusting because they are more democratic. They become trusting because they distribute their resources more equally" (Uslaner, 2003, p. 175). As Przeworski puts it, democracy entails "not just rights but also conditions," which needs to be explicitly incorporated in the concept of democracy (Munck, 2016, p. 20). When evaluating the quality of democracy, there has been a disproportionate emphasis on the processes and not on the outcomes. By focusing on the outcomes including citizen's perceptions, we may be able to move beyond the narrow democratic versus authoritarian construct that has dictated the analysis of governance systems. These approaches may help broaden our notion of democracy that can "rival the minimal definition of democracy" (Munck, 2016, p. 222).

Hence, this paper critically examines these databased interventions in these two contexts to address the pressing question of whether the notion of democracy demands a rethinking, reframing and even reordering of criteria on what makes a 'good' society in the datafied era.

3 From e-governance to datafication: Concerns on inclusion, participation and rights

With the onset of social media platforms, cheap mobile data plans and phones and digitization technologies, governments have become far more enabled in reaching and influencing their citizen's behaviors and perceptions. This informational governance entails two interrelated processes: (1) new forms of governing through information, and (2) transformative changes in governance institutions due to the new information flows (Soma, Termeer, & Opdam, 2016). The increased human interconnectedness through e-governance, self-organization, private governing and empowerments are identified as key elements that can contribute to sustainability, the core goal for public institutions.

In the last two decades, a vast scholarship has risen on e-governance particularly outside the West as a means to leapfrog chronic barriers in inclusion and participation (Garson, 2006; Kumar, Pareek, & Jain, 2018; Linders, Liao, & Wang, 2015). E-governance projects have managed to reach out to long neglected groups such as rural and women's groups and facilitate self-organization through local community building for the management of common pool resources, such as fisheriesand agriculture (Arora, 2005, 2016a; Masiero, 2015; Sreekumar, 2007). This has increased the bargaining power of disadvantaged groups and mitigated some of the exploitative practices of previously monopolistic markets. While much of the evidence points to improvements in communication and dissemination of public services, there has been major challenges in creating deeper structural impacts and generating trust among the citizens. Many e-governance platforms while attempting to become two-way communication portals to generate participation, has for the most part remained a top down process.

Recently however, informational governance has undergone a significant shift as infrastructures of information have become increasingly complex and specialized with the rise of big data, giving rise to 'algorithmic governance' (Kitchin, 2017). Algorithms are sets of defined steps structured to process instructions/data to produce an output. They are increasingly being used to nudge, bias, guide, provoke, control, manipulate and constrain human behaviour, becoming 'smarter' in these functions as more data from citizens are collected and fed into their system. In other words, this creates a governance 'loop' of a system acquiring information, processing it, using it, and then learning from what it has done (Pasquale, 2015). This mechanization of governance has many benefits including enhancing the efficiency, speed, comprehensiveness and fairness of the state and the market (Mayer-Schönberger & Cukier, 2013).

However, this datafication has a dark side, as they are fundamentally also technologies of surveillance, or 'dataveillance' (Van Dijck, 2014). In recent years, studies have revealed that these systems have an increasing capacity to (re)produce and amplify already discriminatory practices. Their asymmetric power structures can further obscure the fostering of new divides in data access, interpretation, representation and ethics (Leurs & Shepherd, 2017). This can increase social inequality as their automating function becomes normalized. As people become sorted through these systems, the system's logic of who gets privileges and who gets blacklisted for instance are hidden. The citizen may start to slowly "disappear" as their role becomes shrunk to a 'user' and 'consumer' with the adoption of automated governance systems that may dictate how they think and act in society (Gregory & Bowker, 2016). This dehumanized decision-making can obscure accountability that would typically fall on the shoulders of government administrators and elected offi-

cials. In other words, these new bureaucratic systems naturalizes a specific governance logic, undermining political struggle.

Surveillance architectures have historically had its roots in colonial empire building, disciplining bodies and systems to the rules of enslavement, exploitation and extraction (Arora, Forthcoming a). Far from enabling freedom and choice for the people, they have serviced those in power through their effective networks of knowledge. Hence, it is reasonable to argue that their inherent characteristics can undermine the legitimacy of algorithmic governance and in proxy, the state itself who proclaim to now instrumentalize these systems for the common good. This datafication can challenge the fabric of democracy as they disrupt the pathway for citizens to play a role in decision-making given the increasing opacity of these technical systems.

Besides the state, technical and scientific experts have gained new powers in the shaping of political matters as they are able to automate values that influence entire societies. This can be viewed as an,

> 'expert Raj,'(an imperium of experts) whose modes of acquiring authority, especially in global institutions, are as opaque to ordinary citizens as the self-legitimating claims of rulers in distant metropoles were to colonial subjects living in the peripheries of empire. (Jasanoff, 2012, p. 12)

Clearly, we have at hand a new intermediary in democracy-making that state actors have become dependent upon. Government bureaucrats need to be educated in the critical assessment of information governance infrastructures as they need to be able to explain decisions that impact their citizens. Hence, for machine learning to work for the wellbeing of the people, we need to institute "procedural fairness" as "our systems don't only have to work

> well; the population has to trust them" (Supergovernance, 2018).

Amidst these concerns, it is easy to forget that humans have been relying on machines to make many decisions for them over these decades from the area of banking to insurance. Machines have been enabling institutions to assess risks and supporting the scaling of such practices for a sustainable and working democracy. The introduction of machine learning may, "have changed the way that the decision is made, but it does not take away from the fact that machines have been making lots of decisions for a long time and people and society seem largely comfortable with this idea." (Supergovernance, 2018). We need to juxtapose these automation systems against human decision-making that has often been fraught with unconscious bias, hunches, and errors. Machines reduce this inconsistency.

Moreover, while weighing the benefits and concerns of machine learning for governance, it is worth asking whether it is ethical to withhold these new technologies, particularly if we are denying the improvement of the citizen's life considerably. For instance, machines can process applications much faster than people can. Is it ethical to make someone wait for thirty days to receive a notification of eligibility for a service, especially if we can give them an answer in a day? Hence, in the following sections, we critically examine how the datafied governance models of India and China measure up as they each promise progress for their people.

4 The case of India: the biometric identity project

The biometric registration, Aadhaar or the Unique Identity (UID) project has been around since 2009. In its early stages, this project was marketed as voluntary, and geared towards the poor. It was intended to include the undocumented into the system so as to be able to correctly disseminate the social benefits to the right individuals. In 2012, it became mandatory for all citizens to have an UID, otherwise they would be denied the entitlements as well as any government services (Arora, 2016b).

There has been a number of improvements in the governance systems with the introduction of UIDs, particularly in the tackling of corruption and establishing more transparency.

> The use of technology to computerize, communicate, and monitor the movement of goods and grain, the opening of post office and bank accounts for payment of NREGA wages, the use of mobile phones to let people know when their rations limits are reached so that they may watch and collect their entitlements, the use of GPS to track the movement of vehicles carrying grain to the shops – these have already greatly improved systems. (Ramanathan, 2015, p. 12)

There is econometric evidence now of the impact of UID on reducing the leakages in public programs, particularly in the dissemination of fuel subsides (Barnwal, 2017). There is a national program that provides eight billion dollars in fuel subsidies for domestic cooking. Prior to UID, the welfare schemes were inundated with identity fraud, as there were few ways to verify proof of authentication which wasn't very costly or due to corruption by local officials who over-reported the disbursement by producing ‘ghost’ beneficiaries. In 2010, the number of households that drew fuel subsidy benefits was about 50 percent higher than the estimates shown by the 2011 census. With the introduction of the UID, it was found to significantly strengthen the state’s ability to target program beneficiaries and purge the system of ghost beneficiaries.

Masiero (2015) in her research on the impact of UID on India’s Public Distribution System (PDS) in Anti-poverty programs in Kerala found that while this new technology did improve the dissemination of people’s entitlements, it did not address several issues that continue to hamper its functioning. The PDS is the oldest, most widely available food security net in India, aimed at providing monthly rationed quotas to poor households. For the longest time, there has been severe leakages in these subsidies due to the ‘rice mafia,’ an illegal consortium of people who have been systematically diverting these PDS goods to the private market. However, the leakage problem has triggered reforms at the state level, such as establishing an allocation software program to ascertain the needs of local ration dealers and the Inspection Monitoring System of routine and recorded inspections of these ration shops to combat the illicit siphoning of PDS commodities.

The UID program was a welcome intervention that built upon these reforms to strengthen such accountability mechanisms. This system ensured that the sale of the rationed goods were diverted to the right constituents through the linking of the biometric details to real beneficiaries. While this is clearly a positive contribution to governance, there have been barriers to the efficacy of this system. Weak computational facilities and abilities of the local ration shop owners, chronic power shortages, inconsistent connectivity, and no legal recourse to reclaim hijacked identities that end up excluding genuine beneficiaries remain unsolved.

Corruption continues as some well-off households were able to get themselves registered

as 'Below Poverty Line' (BPL) recipients, thereby benefiting from such subsidies. Ration shops complain that without this cheating they are unable to sustain themselves given the low government pay. Most importantly, tackling the rice mafia through monitoring of the ration shops is only one part of the problem. What continues the abuse of the PDS is the 'border mafia' who steal these commodities before they even reach the shops, often in complicity with a number of privacy companies. In summary, after almost a decade of UID's operationalization in India, it is worth systematically considering how this project is fairing in their goal to inclusion and participation, some of the hallmarks of a democratic system.

Obstacles to India's databased democratization

The fact is that UID continues to face considerable hurdles, partly due to the fact that they did not consider fully the country's diverse demographic and the environmental conditions within which their citizens operate. Four key areas of concern in the implementation of UID are, 1) digitizing identities, 2) data protection, security and the right to privacy, 3) market inclusion and corporate misuse and 4) political participation.

1. Digitizing identities and self-representation: Several studies have come to the fore that have revealed the problems of relying on biometric data such as fingerprints and iris scans (Arora, 2016b; Gates, 2011; Sarkar, 2014). The system has been particularly disadvantageous to the very people it intended to enable, that being their vast low-income citizens. The quality of fingerprints of manual laborers were found to be problematic as they were faded and thereby difficult to read (Rao, 2013). An estimated 8-10 million people have cataract due to malnourishment, serving as an obstacle to the iris scans. This has resulted in the automatic denial of services to these constituents.

Nilekani, the Infosys chairman overseeing this project claims that UID has saved India over nine billion dollars by eliminating fraud. Khera (2017a) however argues that what passes as 'savings' is often the result of denial of legal entitlements for lack of Aadhaar. For example, in rural Jharkhand, an old woman died of starvation as the system refused to recognize her right to food ("How India's Welfare Revolution Is Starving Citizens | The New Yorker," n.d.). Upon investigation it was revealed that her identity was hacked by someone who diverted her pension to an account of a person who died in 1992. It was also revealed that due to weak connectivity, there was an inconsistent flow of information which prevented people from receiving sometimes lifesaving benefits. More disturbingly, there appears to be a correlation between victims of starvation and caste as a substantive number of them were listed to be low-income Muslims, Dalits ('untouchables'), and members of remote tribes.

2. Data protection, Security and the right to privacy: When designing the UID project, there was little consideration of aspects of citizen privacy and data protection (Jayaram, 2015). This is partly due to the fact that it was only in 2017 that India gained its first privacy law that demanded answers to data protection (Balaji, 2018). This has complicated matters of data ownership and thereby brought into question the mandatory nature of this project, especially if the law sides with the citizen's right to data ownership. The fact is that the right to privacy of information and data protection is an issue that goes beyond just the implementation of UID (Verma, 2018). For transparency reasons, state election commission websites have traditionally disclosed the personal information of every person

registered to vote online and, in many cases, these were published along with information on caste, religion, address, photographs and financial information. Agencies scrape these databases and sell them.

Few measures were taken on the security of these databases or plans to counter illegal and abusive actions such as hacking, leakages, intrusive profiling, tagging, false duplicating or identity fraud, and tracking. For example, the Tribune, an English-language daily, revealed that for eight dollars or so its reporters had bought illegal access to the entire UID database and for an extra five dollars, they were able to print out ID cards with any UID number (TribuneIndia, 2018). It was found that two hundred government entities published private UID data, and some private firms were caught using the UID data for purposes outside their licensed agreements. They made the regulators the custodian of data which is clearly a conflict of interest.

Part of the security issue is to do with the convergence of databases. This centralization and inter-linking of multiple databases of each citizen can result in profiling and self-censorship, as well as unwanted tracking and targeted discriminatory practices (Khera, 2017b). Bringing different data silos together such as travel history, health, banking, education and employment has allowed the government to construct a profile of the citizen. This puts the state over the citizen in the interpretation of the self, one that arguably should be the prerogative of the citizen, bringing to question who controls personal integrity. Further, the compromise of a person’s database is essentially irreversible as you cannot change your genetic data or fingerprints in response to a leak. In 2017, two-hundred students in Mumbai replicated their fingerprints on a widely used resin to fake biometric attendance, bringing to national attention the vulnerability to identity/data theft (“You will be glued to this,” 2017).

In the face of these concerns, the common argument is that privacy is a luxury and an elitist concern as the vast disadvantaged communities in India are actually empowered by being included (Arora, Forthcoming). Some argue that the Hindi word for privacy ‘nijta’ is not a colloquially used term, posing the question of whether privacy is culturally relative. Even if this may be so, the fact remains that the right to privacy is now being coded into law. Thereby, UID administrators will need to make explicit how they will secure their citizen’s identities as part of this larger momentum on providing human dignity.

3. Market inclusion and corporate misuse: There was no explicit policy given on corporate involvement in this process and to what degree could they and other third-party vendors use this vast and converged databases of a citizen for private ends. For instance, foreign companies such as Accenture and L1 Identity Solutions are some of the third party entities that were engaged in the management of these databases (“Accenture, Satyam, L1 win UID deal - Times of India,” 2010). Accenture was found to be linked to the U.S. Department of Homeland Security Smart Borders Project and L1 Identity Solutions were found to have close links with the French government and the CIA. This puts at risk the national interest and security of the citizens as their databases could be used against them at a point in the near future.

The goal of financial inclusion has also been fraught with obstacles and concerns. The UID project established a partnership with a number of authorized user agencies including banks, mobile companies, insurance, hospitals and other state and central government offices to streamline access to loans, licenses, and other documents to ease the citizen’s

efforts to participate in the market economy. The problem however occurs when the institutions themselves have not modified their criteria to ease the barriers of entry, which serves as a reminder that the proof of identification is just one factor in the larger process of market inclusion. For example, banks continue to reject low value customers in spite of the UID system as they are considered high-risk (Mehta & Kulkarni, 2016).

4. Political participation: Indian politics is immersed in giving special reservations to scheduled castes and tribes, and 'other backward castes', groups that have been chronically discriminated against due to the caste system (Arora, Forthcoming a). Citizens have a high stake in being digitized in one of these categories to maximize state benefits. The problem with digitizing political audiences in India along lines of caste is that it does not take into consideration the dynamism of such groupings. Numerous protests by Jats (a privileged group of land-owning peasants) has pressurized the Indian government to include them in the 'Other Backward Caste' category so they can be guaranteed university places and government jobs. Also, take for instance 'female Brahmins' as a category – while high caste, they are often deeply vulnerable as they are more bounded by social rigidities than females of lower castes. Yet, given they are Brahmin, they will likely be demarcated as exempt from the traditionally exploited gender group.

> Contrary to conventional polling, intra-caste hierarchy and evolving political arrangements between caste groups create a challenge in the digitization of these group identities, linking them to special state benefits. For instance, collective bargaining of caste groups in India is typically linked to garnering votes and alliances to particular political parties. However, contrary to conventional assumptions of caste groups being divided, the Dalits (the "untouchables") have time and again partnered with the Brahmins (the high caste) to strengthen their bargain with political parties. Further, current day realities defy conventional notions of caste and class as being mutually exclusive. Hence, the digitization of the Indian citizen promises to freeze privilege along lines of communal politics strengthened during the British Raj over two centuries. (Arora, Forthcoming a)

Overall, this has brought to question the instrumentalization of universality, uniqueness, and permanence in biometric identification as a pathway to democratization.

5 The case of China: the social credit score project

According to the Chinese government's Planning Outline for the Construction of a Social Credit System, the system aims to measure and enhance 'trust' between and among government, commercial sectors and citizens and to "strengthen sincerity in government affairs, commercial sincerity, social sincerity and the construction of judicial credibility" (Botsman, 2017). While this system will be launched in 2020, evidence is surfacing on how these databased systems are being used in different social zones to promote social safety, financial inclusion and citizen participation. Moreover, this system is not novel per se as it builds on an already existing and highly popular commercial service called 'Sesame credit,' implemented by Alibaba's Ant Financial (Kostka, 2018).

In 2017, it already had 520 million users (Sun, 2017). Having launched in 2015, this system has collected enormous amounts of data from e-commerce. It intersects this data with people's payment history and their contacts, to compile a score from 350-950, allowing users with better scores to gain 'special privileges' such as renting a car without leaving a deposit, a faster check-in at hotels, cash loans and even fast-tracking visa applications. In other words, it's a datafied loyalty scheme, to reward good consumers and punish bad

consumers. In fact, high scores have become a status symbol and have been used to attract suitors on dating sites (Botsman, 2017). Alibaba's rubric takes five factors into account, namely a) credit history, b) fulfilment capacity, (a user's ability to fulfil his/her contract obligations) c) verified personal information (including mobile phone number and address), d) behaviour and preference, (for example, whether the user chooses to buy diapers or books versus play video games, giving higher rating to the former category,) and e) interpersonal relationships, what type of friends do they keep (Ding, Chong, Chuen, & Cheng, 2017).

Clearly, the last two categories signal moral policing, nudging citizens to align with the party's socio-political outlook, provoking the vast negative discourse in Western media of this system being synonymous to an Orwellian 'big brother' technology system. As per the traditional template of democracy, this system is clearly authoritarian. However, if we are to factor in efficient and effective governance, citizen perception and behavior, increased market and social inclusion and participation, this becomes a more complicated conversation as the following points reveal.

1. Legitimacy of the state: Meng (2010) argues against the constrictive nature of the Western paradigm of democratization to comprehend contemporary Chinese society. Through this traditional lens, electoral politics is equated to legitimate state power that can be challenged through laws and citizen speech, including through the use of new communication technologies. However, China's long communist past, she argues, has given grounded legitimacy for the authoritarian state, establishing paternalism as the normative relations between the regime and the Chinese people.

Chinese censorship comes with elaborate systems of information control including the Chinese firewall and the 50 cent army, where thousands of moderators manually block content unfavorable to the party and instill misinformation and comments to change or diffuse the conversation online (King, Pan, & Roberts, 2013, 2017). While this is clearly an undemocratic modality of control, it can be argued that the West has fostered technology oligarchs that override the interest of the society for that of corporate profit.

> If AI [artificial intelligence] remains under the control of market forces, it will inexorably result in a super-rich oligopoly of data billionaires who reap the wealth created by robots that displace human labor, leaving massive unemployment in their wake. (Xiang, 2018)

The fact is that currently, democratic states are struggling to reign in the multinational technology monopolies who are more accountable to their shareholders than the citizens in nations they operate. Facebook, Google and Amazon continue to control the majority of citizen data emanating from social, search and purchase behavior, trapping users in their walled gardens.

In this light, Chinese governments while providing their own internet firms with extensive commercial freedom to innovate and compete, have streamlined them closely to account to the state's development goals. For instance, each of the Chinese tech giants have been given a certain responsibility to make China a national data champion: Alibaba collects data needed for smart cities, Baidu for autonomous vehicles, and Tencent for medical imaging. Hence, while liberal democracies are becoming more enslaved by their 'technopolies' (Neil, 1992), the Chinese government ensures that their companies work to promote the state's vision of being a global leader and innovator in datafied governance. In recent polls on approvals of the social credit system across incomes, it was found that

more than seventy percent either somewhat to strongly approved these measures of governance (Liang, Das, Kostyuk, & Hussain, 2018).

It is well worth noting that the Chinese centralization approach is akin to one of the most revered ideologies in Western democracy by America's founding father, Alexander Hamilton, who argued for strong central institutions in the economy and politics (Pasquale, 2015). This approach would treat data-driven companies as public utilities so that the benefits could be distributed fairly in society, as expected of a democratic society. In other words, when censorship is mixed in with good and creative governance with a promise for a better life, it becomes more challenging to paint a black and white picture of Chinese style authoritarianism as purely that of oppression.

2. Financial inclusion and market participation: The financial sector in China is controlled primarily by the state (Wang, 2018). Hence, it is no surprise that the fin-tech or the 'internet finance' business in China is subjected to the same regulatory measures. The three specific forms of this new industry – third-party payments, peer-to-peer lending and the money market funds, have broadened the banking sector and succeeded in including much of China's citizenry into this fold. By 2017, China became the fin-tech global leader, taking over more than half the global market, much in alignment with the broader vision to be the trail-blazer in all things tech ("In fintech, China shows the way," 2017). Fin-tech, due to its leveraging of big data, algorithms and blockchain technologies, have succeeded in disrupting this traditional sector and fundamentally changing the ease with which users can access loans, pay their mortgages and fees, shop, and send money to loved ones through their personalized electronic wallets.

With a deep communist history and thereby a lack of assets or credit history for banks to use to evaluate and manage risk, social credit scores offer an alternative model to banking. This consolidated citizen rating provides assurance to these institutions by calculating trustworthiness based on past and ongoing behaviors of citizens. This has exponentially infused financial capital into the society, enabling citizens to mobilize and invest in themselves and their entrepreneurial efforts for a better social life (Kshetri, 2016). It has made consumption highly efficient and even engaging through popular apps like AliPay, WeChat Wallet, and other such payment tools.

In spite of this impressive leadership in this new datafied financial sector, the Chinese inclusion model doesn't align with the more universal definition of financial inclusion outlined by the World Bank, which targets such interventions to lift the bottom two billion poor and unbanked by providing them formal access to financial services (Wang, 2018). Hence, while this new system promises to radically open up banking to small-scale businesses and individuals with small amounts of wealth, it may come at the cost of widening the financial divide, especially along the faultlines of the rural-urban divide.

3. Social order and citizen tracking: Given this is a unified state system, the data can come from diverse locations and events. In early May, for example, a young man from Shanxi was blacklisted and thereby banned from traveling by train for 180 days as part of the Social Credit implementation in this county (Fullerton, 2018). He reportedly jumped on the ticket barrier at the Yangling Station, causing this penalty. In Shenzhen, police have instituted facial recognition technology to catch jaywalkers, and other traffic violations that will impact the citizen score. While foreign media frames this as "creepy," Chinese media describes this as an "avant-garde" way of creating a "harmonious" society

(Koetse, 2018).

On the flip side, the credit score can provide an answer to the rising revenge pornography, cyberbullying and online misogyny that more traditionally democratic societies continue to struggle with (Arora & Scheiber, 2017). It has integrated a blacklist of more than 6 million people who have defaulted on court fines into the Credit's database (West, 2018). This system has already helped courts punish more than 1.21 million defaulters, improving their enforcement mechanisms on those who break the law. These measures have been received positively as anxiety about "pianzi" or swindlers is high among Chinese citizens. This system helps to screen out the people they do business with, especially online. It has also increased the faith in law (essential for democracy) as these new measures of enforcement come into play.

Putting morality aside and looking at past barriers to keep social order, the state with the biggest population in the world has had the challenge of sustaining a civic society through traditional measures. In the 16th century, a system known as "baojia" was devised, requiring households to take turns to monitor each other's activities. Under Mao, the regime instituted the "dang'an" system, where dossiers were kept on every individual on their political and personal transgressions (Liang et al., 2018). Today, these communal vigilante systems are supplanted by urban neighborhood committees, "elected" by residents from party approved candidates, to oversee the specific urban grid they are assigned to and report on local issues to the central government. Enabled by these datafication systems, these systems are more efficient and socially beneficial but also, can be deadly if used to oppress their people. Obedience, in other words, is gamified, where, "the government is attempting to make obedience feel like gaming. It is a method of social control dressed up in some points-reward system" (Botsman, 2017).

4. Social inclusion, representation and minority rights: Social inequality in China arises less from ethnicity and more from the urban/rural income disparity ratio (Sautman, 2014). Given that over half of Han are urban as compared to for instance, only 20 percent of Uygurs, this divide appears along ethnic lines. A global study among sixteen countries on ethnic subordination and discrimination recorded that when asked if governments should make an effort to prevent discrimination based on a person's race or ethnicity, 79 percent were in agreement on average while 90 percent of Chinese agreed. Further, when asked about equal treatment for all people, while 69 percent on average said it was important, Chinese results were 90 percent. Through this lens, China is more in alignment with international human right norms regarding minority rights.

That being said, the Hukou policy of the 1950a entrenched the rural-urban divide, which strictly control household registrations and movements of workers within the country (Afridi, Li, & Ren, 2015). This has allowed for the policing of rural migrant workers since the 1950s, allowing them to help build the urban economies while keeping them in the illicit zone, and thereby, preventing them from accessing welfare benefits of healthcare, education and social housing. The expectation was to eventually push these peasants back to their rural lands after taking advantage of their labor. Hence, two kinds of citizenship were formed, one the urban citizen with a higher social safety net and the other, the rural citizen, or the 'second-class' citizens. These systems get datafied, reproducing and even amplifying these divides.

Evidence abounds on how the Chinese police detail these migrants and impose fines based

on the 'three withouts, meaning 'without ID card, without temporary residence permit and without proof of employment' (Sautman, 2014). Given that migrants are often day laborers and cannot carry with them many belongings on construction sites nor is it safe to leave these important documents while they work, the reality is that this system has created significant local corruption through such tariffs. In this context, the social credit score and smart recognition technologies can tackle such corruption practices if mobilized.

However, the opposite effect occurs with thethe Uighur communities, the largest Muslim group in the country who are policed over that of the Han Chinese ("China has turned Xinjiang into a police state like no other - Apartheid with Chinese characteristics," 2018). In Xinjiang, policing operates on a grid management system of about 500 people to keep tab on the inhabitants. There are booths established at the entry ways to urban areas, where Uighurs are asked for their identity cards, photographs, fingerprints and iris scans. They need to turn on their phones and enter their passwords to show the policeman, who then puts it on the cradle to download their contents for analysis. This 'web cleansing' policy has been stated as necessary to prevent terrorism. Everyone in Xinjiang has to download a spyware app on their phones to track their social media behavior. Not complying will result in the Uighurs send to "re-education" camps. Hence, such targeted data surveillance based on group identities threatens to create fractures in Chinese communities, especially along ethnic lines.

In documenting 'ethnic identification,' the state uses the criterion of descent to establish ethnic identity (Tong, 1992). A person with one-eighth ethnic minority descent can claim minority identity, without proving cultural affiliation or language competency. In response to the growing backlash against the Hukou system, the Chinese government granted certain minorities preferential treatment and privileges that included less tax, more governmental subsidies and in the past, suspension of the one-child-per-family restrictions As a result, Chinese people are faced with a dilemma in self-representation –to try to claim ethnic minority status or not.

6 Concluding remarks

The development state has always been a surveillance state. While welfare is peripheral to the core governance model in wealthy western nations, it is central to nation building in India and China given their vast disadvantaged demographic. This rests on the postcolonial development paradigm with a paternalistic approach to conditionality, the criteria for deservingness. Entitlements used to distribute social benefits in the West is centered on self-responsibility and individual participation in the market economy (Eubanks, 2018), while in India and China, it is tied to group affiliation (caste, ethnicity and rurality) (Arora, 2016b). This showcases the equality versus equity approach in the democratic distribution of social benefits. Welfare recipients do not enjoy the full rights of the average citizen, even in democratic countries. This creates a dual class citizenship, fostering a schizophrenic view of nations like India and China as both democratic and authoritarian depending on which group/individual experiences we decide to focus on.

The datafication of social behavior in China can possibly amplify and even disrupt traditional privileges. The economic apparatus of the West can be pitted against the identity apparatus in India and the growing moral apparatus in China. While ideologies run deep

across governance models and shape the datafication of social systems, China is more explicit in quantifying virtue. Both Indian and Chinese databased systems are rationalized to be more inclusive and fairer as they target fake identities and systemic corruption through automation. However, as explicated in this paper, we need to be wary of any techno-centric reform as it does not necessarily translate to structural changes. It may even give rise to new forms of deviant practices such as new black markets for datafied products and protections.

Centralization should not be used as a proxy for authoritarianism. We have yet to figure out the optimal relationship with monopolies of essential resources so they can deliver benefits instead of harm for the citizens. Independent regulators and strong data protection services and laws are what stands between centralized systems becoming authoritarian and vulnerable to leakages and privacy violations. While for instance, the United States has chosen to be a capitalist-driven democracy where the state is subservient to the corporation (and nowadays the tech sector), in India and China, it is the reverse. This comes from a long-standing relationship even during the colonial days as in the case of India, where new technologies were looked upon as a pathway to a modern and democratic state. For instance, Tata and Reliance worked with state leaders during the independence movement to charter the new Indian state. Today, Infosys demonstrates its patriotism through the much passionate evangelizing of the datafication system, beyond that of efficiency to that of nationhood. With China and its communist party, these tech giants have to put the party over the consumer.

Furthermore, we cannot only adopt the rights lens to privacy in India and China as it is indeed a privileged position to have. Privacy has long been a luxury. The poor have been chronically tracked through surveys as part of the development project and have for generations experienced persistent and pervasive publicness. Poverty yields a complex array of public behaviors and inhabitations that have become institutionalized and even enculturated over time. This is not to undermine the fact that privacy is inherently about dignity. However, we know little of the ways in which privacy is materializing among these vast demographics in India and China, particularly with the onset of these datafied systems. Alongside rights, we need to consider cultural norms and digital literacies to capture a more dynamic and non-universalistic approach to privacy trade-offs.

Lastly, we need to give much more credit to the novel fin tech apparatuses in the making as this shows a commitment to innovating a solution to the problem of a dearth of assets among the marginalized majority. Risk has been recalibrated in an imaginative way to include a vast number of people into the market economy, allowing them to become empowered through these choices. While this paper doesn't excuse censorship and oppression of activism and free speech that China continues to exercise, the intent here is toallow for a broader conversation on the notion of democracy. It takes into account aspirations of the people and their perspectives on the temporal trade-offs they are willing to ensue as they mobilize themselves forward. To broaden our understandings of democracy as practice, we need to recognize that we need to move beyond the moral high ground where rights become absolutes. We need to give credence to efficiency through good governance as this is usually the first tangible encounter that citizens have with the materializing of democratic values in their everyday lives.

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