Decrypting Aadhaar

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Abstract

The topic of Aadhaar links with the Indians in various ways. Aadhaar can be thought of as a digital infrastructure that has been an enabler and disabler in its ways. I explore some of these ways through my article. I tried to question the proposition of introducing Aadhaar and carefully studied its theoretical benefits. Furthermore, I wish to explore the abominable ways in which welfare, particularly the issues, has changed with the integration of Aadhaar. We shall refer to the various themes in infrastructure studies and Foucault's works. In this research, I try to link my analysis with the major themes explored from a shared pool of resources.

Keywords: Aadhaar, Foucault, privacy.

1. Introduction

The term 'Aadhaar', with its origins in Hindi literature, implies 'foundation' or 'base'. The year 2010 revolutionised this simple word from the Hindi dictionary, and the term revealed its ability to create an exquisite impact. As per UIDAI (Unique Identification Authority of India), Aadhaar creates a unique identity for India's citizens. It is not just another card but a 12-digit number that can recognise an individual irrespective of their whereabouts. Aadhaar can be used as a general identity infrastructure, and any identity-based application can be used; UIDAI will generate yes/no. There is no answer to any query related to identity authentication. The pursuit of uniqueness has left extraordinary charm. Even though the card was not introduced as a mandatory document, it has acquired a central position in defining 'the being' of any citizen of India. If we look at the foundations of Aadhaar, it was introduced as "a voluntary service that every resident of India can avail irrespective of present documentation". Thus, Aadhaar was made a primitive document based on the principle of 4 Demographics + 3 Biometrics = 1. The only Aadhaar, the only document needed is the human body, the unique template. Though Aadhaar was not made mandatory in writing its application, it became a necessity.

2. Is Aadhaar Necessary?

Aadhaar has been hailed as an extraordinary instrument in the implementation of public policy. It is said to play a pivotal role in removing leakages or duplicity of data in the social support system by targeted delivery. Thus, Aadhaar is penetrating all forms of public services and processes, including filing Income Tax or availing jobs via MGNREGA Act 2005 (Mahatma Gandhi National Rural Employment Guarantee Act 2005). The government states that it faced multiple problems in reaching out to the poor and marginalised citizens. As a result, the benefits never reached such people due to lack of adequate documents. However, the government claims that Aadhaar has provided a platform of direct conveyance of benefits and at a reduced cost. According to the National Institute of Public Finance and Policy, the benefits of the Aadhaar project will surpass the costs soon. It claims that by 2020-21 the total benefits would be Rs.25,100 crore against the total expenditure of Rs.4,835 crore.

2.1. However, was there a need for another identifier?

There are two ways of enrolling for an Aadhaar number from the UIDAI directly. One way is by using a proof of ID and a proof of address from a list (including passports, ration cards, voter IDs, etc.) drawn up by the UIDAI. The other way is by using the "introducer" system. This was set up keeping in mind those people who were lacking pre-existing documents. According to a response to a Right To Information (RTI) query in 2015, a billion Aadhaar numbers were issued, only 0.03 percent of them were through the introducer system. The rest were issued to those who submitted either two documents or through NPR, raising questions about the basic premise of the Aadhaar project.

2.2. Did the Aadhaar project bring in checks?

The extensive work by Dr Reetika Khera identifies three forms of fraud. First, 'Eligibility fraud' is when ineligible people are included in welfare schemes by providing fake documents. Second, "Quantity fraud" is when eligible persons do not receive their full entitlements; for example, they may be undersold rations. Third, "Identity fraud" is when another person claims a person's benefits. Although identity fraud can be reduced by biometric authentication, the extent of these kinds of fraud must be understood before revamping the entire welfare system. There was no evidence of a substantial decline in fraud within the welfare schemes with the implementation of Aadhaar. Let us perform a simple cost-benefit analysis of integrating Aadhaar into the Welfare fabric of India. First, the Aadhaar number of individuals has to be "seeded" or linked to the Management Information System that handles a particular welfare scheme. Second, there is a requirement for a Point of Sale machine that will verify the individual's biometrics to provide access to welfare. The claimed benefit is that of lesser identity frauds. However, in response to an RTI (Right To Information) request, the government revealed that only 12.6 percent of all deleted job cards were fake, and the rest were deleted for other reasons, such as change of address. Aadhaar related savings have been mentioned at over Rs 90,000 crore by UIDAI's current chairman. However, this figure does not tell us how many of these are due to a fall in the number of genuine beneficiaries rather than de-duplication. Clearly, the numbers tell us a different story on the state of welfare with Aadhaar.

3. Foucault's ideas of surveillance and governmentality

Aadhaar as infrastructure has enabled draconian measures. The complex network of Aadhaar catalysed the various cases of suppression of dissent we have seen over the past few years. The infamous Bhima Koregaon riots witnessed hundreds of people with no direct links to the violence being unlawfully detained. Aadhaar enabled tracking of the circulation of money as donations to leftist movements and organisations. A simple trace of the money trail would lead to the state having a clear picture of who contributed how much money to what cause. This almighty "eye" enables the state to quash any form of protest, movement, or gathering that goes against their ideology. Funding is the fuel for a large-scale protest, and the state has the power to cut this crucial component of a movement using Aadhaar.

A super-powerful apparatus that the state can use for surveillance, Aadhaar enables the state to track a real-time digital version of ourselves. With every aspect of spending and welfare linked to Aadhaar, the entire territorial span of India has transformed into a massive "panopticon". Our movement across interstate tolls can be tracked through the Fastag mandate for every vehicle. Our financial transactions can be tracked since our bank accounts are Aadhaar linked. Our phone SIM cards are linked. Our purchases of certain luxury items are linked. Buying a house, joining a school, opening a trading account to invest in stocks, and many more activities are linked to Aadhaar. This "link" joins all the points of contact we make with the economy (services, goods and products) and the state (welfare). One can imagine a cluster of nodes with the individual (Aadhaar number) being at the centre and every other node being a point of contact with the outside world. The edges linking all these nodes to the centre is Aadhaar. This is strikingly similar to the Panopticon that Foucault refers to in his work on surveillance. While the observation of states using techniques to know and document their subjects is not new, the socio-technical assemblage that constitutes India's changing approach to population governance of which Aadhaar is a part is distinct, and this stems out of its digital nature. In Foucault's description of governmentality, he highlights three things. First, it is a complex form of power that works through the activities of the government and targets the population. Here the population is defined as a "fundamental component of the state's power that requires maintenance through a regulatory apparatus that will ensure that the population will work properly, in the right place, and on the right objects". Second, he highlights that governmentality has slowly drained all other forms of power, including sovereignty and discipline. Third, he emphasises that these changes are slow. There is a stark difference between citizens and the governed population. A state-citizen relationship means the citizen's participation in matters of the state, which is in line with the idea of popular sovereignty. However, a State-population relationship means the government has access to a set of identifiable, classifiable, and manipulable instruments in order to target certain inhabitants for their policies. Technologies of governmentality such as Aadhaar govern identified populations as subjects rather than citizens, isolate governance from politics, and make the policy a "business for experts rather than for political representatives". We can see how Aadhaar contributes to the three key elements of Foucault's governmentality. It is a crucial technology of government to target populations. It has become the primary mode of power in welfare. Aadhaar exists behind a front of reducing "leakages" in the welfare system, in line with a longstanding trajectory of "participation", "good governance," and "e-governance" in India.

3.1. Infrastructuring towards a Data Economy

Data is a set of values of qualitative or quantitative variables about one or more persons or objects. A data centre is a dedicated infrastructure to house large computer systems which stores, processes, and disseminates data. It is a physical infrastructure for digital infrastructure. This is a place where data can be commodified, and unlike other tangible commodities, the turnover time (in Marx's terminology) for the data commodity is minuscule (Couch et al. 2020). A question to pose is whether UIDAI is a data centre? In principle, it is not. The UIDAI claims it was formed neither to aggregate Aadhar data nor to explore ways of monetising it. Aggregating and monetising data are two characteristics of a data centre. A well-known data centre is the UIDAI's chairman's former company - Infosys.

Further, the way UIDAI is supposed to work in theory does not satisfy Marx's C-C' equation. UIDAI does not add labour time to refine the data commodity C to C'. Upon request from third parties for authentication, the sole responsibility from UIDAI is a binary yes or no answer. No further information is to be provided. However, all this is in theory. The reality of UIDAI's operations is partnerships through the convenient PPP (Public-Private-Partnership) model that we see emerging in every sector. This casts doubt over the claims of UIDAI that support it not being a data centre.

Aadhaar has now become constitutionally validated and is mandatory for availing welfare benefits. Moving slightly away from welfare, Aadhaar did not commodify data. It was a means to commodify data. Aadhaar was the first step towards creating a large-scale tech application that would generate revenue. The Aadhaar database is a foundation for a technological powerhouse called India Stack. In computer science, it is called an API, an application programming interface. It is a technology that receives requests from private companies and provides appropriate data or solutions in simpler terms. This is an infrastructure that private companies can use to develop profit-generating digital software. UIDAI enabled the corporate capture of state power through India Stack.

4. Trading privacy for security: identity or identifier

The whole process of Aadhaar brings the people from the margins of informality into the sphere of legality and hence makes them visible administrative forces. As nothing new comes or can come into being, the only change that can occur is a change in the contrast effects of the status of the Aadhaar as an identity or an identifier. The current Aadhaar regime highlights the contentious relationship of trading privacy for security with the mentioned early realm of the welfare market. This section attempts to link and explore Foucault's key themes and analysis through the course lectures and resources.

If one sees it from Foucault's way, the first primary way one would see Aadhaar identity as a form of security. I can explain in the following example of security. Foucault mentions that in the state's control of the people, the basic phenomenon of acquiring power over people came under state control. There is a certain tendency that leads to state control of the people (Garland 1986). For example, before Aadhaar was introduced by UIDAI in 2009, buying a SIM card involved just a single document such as proof of address without any biometrics such as

fingerprints. An article mentioned in the Hindu mentions that the customers are not aware that biometric data is recorded and stored. Therefore, retailers collect fingerprints from them multiple times. When the fingerprints match, all the details, including the photo available on the Aadhaar card, are automatically captured in the mobile phone service provider's Know Your Customer (KYC) form. Previously, this was done manually using photocopies of proof of client identification. Retailers who produce multiple SIM cards using the same identity are said to sell them to scammers between 1,000 and 3,000. One could even take a sim card in somebody else's name by submitting a fake proof of address. Any form of Identification was sufficient, and it does not have to be your own. That preserved some anonymity as only your broad location could be traced but not much else. The state cannot profile an individual in any way, as profiling was not a mainstream issue then.

Nevertheless, after introducing the Aadhaar card in 2009, Aadhaar was made voluntary where an individual has their fingerprint linked with a phone number. One can understand in the way of linking surveillance to numbering as identifier refugee camps. As in a refugee camp, a specific number identification is issued to an individual. The refugees sleep together in large rooms called camps to be easily monitored and discouraged by lack of privacy. Thanks to surveillance, those who came to power in the refugee camp could see everything and punish those who were not used to be submissive. Moreover, this is how the Aadhaar card notion can be linked to location (Brusseau 2020). If an individual has no identifier, then living as a refugee or a migrant, the state will not come after protecting that individual, implying restriction of movement. People without birth certificates in Bombay, for example, cannot even register a crime as the victim does not even exist in the eyes of the state. The State mechanisms exclude them from the surveillance as mentioned above structure created for its existence; for say, one can observe a probable transition from voluntary to mandatory use of the Aadhaar. Police demands hafta, cannot get bank loans, more exploited. If a refugee wants to be a citizen, he does not have an Aadhaar card, so can be exploited through the state. If the state has not commodified Aadhaar, why would people using older mechanisms be irrelevant? The state wants to move towards a single identification, that is, the Aadhaar. On a driver's license, there is an expiration date. An individual is out of surveillance for the next 20 years after the issuing of the license. Nevertheless, the Aadhaar card does not have any expiry. As already mentioned in the above example, the state tries to tighten its grip on an individual. The excuse given by the state is, the state acts as an identifier and the introduction of the identification system of an individual increases security. According to Foucault (1977), this is a form of the mechanism of control. A person without an Aadhaar card is exploited by the state just because he does not have a card. The state wants the card to do surveillance. How? You register for Aadhaar or pay the price. Trade privacy for security. This trade-off is what Deleuze describes these regimes as 'societies of control.' From Gilles Deleuze "Postscript on the Societies of Control," 1990, quoted,

"In disciplinary societies, the individual passes from one closed environment to another: the family; the school; the barracks, the factory ... Now, societies of control, operating with computers, are replacing disciplinary societies ... Enclosures are molds ... but controls are a modulation ... that continuously change... perpetual training replaces the school, and continuous control replaces the examination. The numerical language of control is made of codes that [allow or disallow] access to information. We no longer deal with the mass/individual pair.

Individuals have become "individuals" samples, data, markets, or "banks." The operation of markets is now the instrument of social control ... short-term and rapid, but also continuous and without limit, while discipline was of long duration, infinite and discontinuous ..."

It brings us to the terminology of the society of control, i.e., social power no longer 'disciplines' as in the neoliberal era, however, combines the a priori internalisation of social expectations, with a posteriori control of certain limits. Individuals can only move freely within limits.

Compared to disciplinary societies, societies of control will become societies of surveillance. For say, your public profile cannot be hidden from your work profile; all are linked. Facebook, google standard account required. You have only one common identity, where your workspace bleeds into your house, which bleeds into your hobby. Say you did something stupid on the internet, say made some political statement. One of the trigger warnings will light up: you are posting political content on your social account. Because of that, you may face repercussions in other spheres, such as you may be denied a loan, denied some other essentials, discriminated against. You may be flagged as a volatile individual, and slowly the security/control mechanisms will tighten around you. Your Aadhaar card may get blocked. A link can be found along with Rachna Khaira, who could find the Aadhaar card details with a payment of approximately Rs.500 online. So, control is exercised by trading privacy for security. The same thing happened to Snowden, an American whistle-blower; all his accounts got frozen, his identity got revoked by the state. There are several articles mentioned in the British Broadcasting Company's NewsChannel, and in one of them, Edward Snowden tweeted on the following on Twitter,

"The journalists exposing the Aadhaar breach deserve an award, not an investigation. If the government were truly concerned for justice, they would be reforming the policies that destroyed a billion Indians' privacy. Want to arrest those responsible? They are called @UIDAI."

This brings us to the Supreme Court's stance on privacy on the side of the state's disciplinary activities for its power over people. According to the Software Freedom Law Center, "India, the Supreme Court has delivered its long-awaited decision in the Aadhaar case, with the key view - Dipak Misra CJI., AK Sikri J., AM Khanwilkar, J. and Ashok Bhushan J. (Although Bhushan J dissolved by a majority on some points) The Aadhaar Act, 2016 retained its constitutional status, barring certain provisions on the use of private information, criminal conduct and seriousness in the use of crime. DY Chandrachud J. He mentioned the differences in the Act as well as the whole base plan."

4.1. Security Issues from a Tech Point

Aadhaar is the world's largest biometric identity database, involves a large amount of sensitive data. It is thus vital that this data stay secure and the privacy of individuals is not breached. Privacy protection does not demand that data should not be collected, stored or used, but that it could be reasonably proved that the data is used only for the purpose for which it has been approved. There are several security concerns with Aadhaar that neither the Government nor UIDAI has addressed. Security concerns identification of individuals without consent using the global Aadhaar number. It could also be used for the correlation of identity data across

multiple domains to track an individual. Surveillance, tracking or profiling of people beyond legal sanctions using the centralised database. This can be done by using authentication records to track the location, time and context of authentication.

4.2. Problems with Aadhaar

Authentication without consent – For Aadhaar, biometric information is used for authentication relying on the assumption that this information is private. However, people’s fingerprints can be lifted from objects they touch (Houck Houck, 2008). Even iris data can be picked through high-resolution cameras. Possible solutions: Authentication systems other than biometrics can be used like OTP (One Time Password). Biometrics can be reserved for exceptional cases depending on the context. This may be used in addition to manual oversight.

Aadhaar number and Identification without consent - Aadhaar number is a single unique global identifier that must function across multiple domains. It is not only publicly available but also in a human-readable form as a number. Once the Aadhaar number of an individual is known, they may be identified without consent across domains. This ease of obtaining other’s Aadhaar number can lead to cases of identity theft. Possible solutions: One solution is for the UIDAI to issue different local identifiers (different Aadhaar numbers) for different domains and cryptographically embed a unique “master identifier” into all local identifiers. This ensures that different domains are delinked.

Protection of user data - There are three entities at work: network, authentication servers, and clients. If any of them is compromised, data can be leaked and misused. UIDAI has some measures to prevent this, but it lacks protection from insider threats, which are most important to protect against. Even though data is encrypted, the decryption keys are stored within UIDAI, potentially accessed by an insider. Also, there is no well-defined procedure for investigations, analytics and audit. Possible solutions: The authentication servers must never store any user data and may only store a Hash, a value calculated from user credentials through a one-way function, and use it for matching. There must be safeguards in data and programs which detect tamper. There has to be an independent third party that can play the role of an auditor. The third-party has to keep part of the cryptographic decryption keys to be used as part of a distributed key management protocol. All investigations and analyses must only happen with pre-approved tamper-proof computer programs.

5. Conclusion

The Aadhaar project was an unnecessary government gimmick in the name of providing welfare to the marginalised. The state is evading the responsibility of managing balance sheet allocation and resource redistribution. Subsidies to the people have now become subsidies to corporations through the people. The core of welfare is to assist those who cannot participate in open markets. Aadhaar has been a tool to push those who are not financially able into the open market. Through this article, I have attempted to link critical concepts of Foucault to the methods that the Indian government can carry out mass surveillance through Aadhaar. The precise Identification of those opposing a policy or law is a step toward becoming a police state. The idea of democracy is lost when the state detains those who express dissent. The

freedom of speech and expression is under attack. Most of the population does not realise this since Aadhaar is considered just another ID card. I try to detail how the governance equation has changed with Aadhaar. Now, the state governs a population and not citizens. The entire project was proclaimed to be a resounding success across the world. India's image was transformed with technological advancements such as India Stack built on Aadhaar. Fintech companies like Paytm, Phonepe transformed into unicorns through the ease of gaining new users as Aadhaar enabled a streamlined KYC process. The startup ecosystem in India changed, and this made the government, in particular, Modi seem like a Messiah. However, was the destruction of livelihoods worth all these temporary superfluous gains? The answer should be No. The state has abandoned its duty. Aadhaar has incapacitated more than it has enabled.

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