Is my health and personal data really secure in a pandemic?

Assessing techno science, risks, and hidden politics of the Aarogya Setu app

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Abstract

The advent of the COVID-19 pandemic has fostered a technological determinism for deploying digital contact tracing tools across the globe. Such an overt reliance on technological tools for the emergent health risk from the pandemic has also magnified the existing socio-economic and political risks embedded in neoliberal India today. In this context, we argue that the Aarogya Setu app, through its cultural embodiment and design, is being engendered and deployed by the state to nurture some of these existing risks as well as promulgate new ones. Moreover after analyzing its technocratic efficacy and highlighting its reflection of majoritarian politics, we also contend that the app is 'inherently political' while recording a user's personal information. Thus, it becomes crucial to analyse the privacy implications for the user to develop strategies to resist the rampant datafication of lives promoted by such digital contact tracing tools.

Keywords: Corona, Datafication, Aarogya Setu, Covid-19, Neoliberal, Health Risk

Corona Go! Go Corona! - Chant coined by Shri Ramdas Athawale, Union Minister for Social Justice and Empowerment to raise awareness of COVID-19 at a public function.[1]

The highly infectious COVID-19 (SARS-CoV 2) virus, which originated in Wuhan, China, was declared by the World Health Organization (WHO) as a global health emergency on 11th March 2020.[2] The declaration of pandemic led to imposition of lockdowns across nations, such as India, as a precautionary measure to contain the spread of the infection by mandating populations to self-isolate, quarantine and maintain social distancing. After the call for a one-day Janata Curfew on 22nd March 2020, the 21-day Phase I Lockdown was ordered from 24th March 2020 to 14th April 2020, which was extended from time to time till June across most states in India.[3] Such an imposition was justified to contain the swiftness of community spread, reduce the burden on doctors and frontline medical staff, and build strategies to improve capacity of the healthcare system to facilitate greater testing and medical interventions such as vaccine and drug development, quarantine centres, treatment, and other aseptic procedures.

However, this sudden imposition of lockdown across India gravely impacted the transnational as well as informal labour and business sectors, socio-cultural fabric of diverse societies, and other

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[1] Covid 19: 'Go Corona, Go Corona' chants Union Minister Ramdas Athawale as if to send the virus back from India, Times of India, 10th March 2020
https://timesofindia.indiatimes.com/videos/news/covid-19-go-corona-go-corona-chants-union-minister-ramdas-athawale-as-if-to-send-the-virus-back-from-india/videoshow/74562339.cms

[2] Ducharme, Jamie. World Health Organization Declares COVID-19 a 'Pandemic.' Here's What That Means, TIME, 11th March, 2020
https://time.com/5791661/who-coronavirus-pandemic-declaration/

[3] HT Correspondent. Coronavirus lockdown phase-1 ends, phase-2 begins: Summary of India's fight against Covid-19, Hindustan Times, 15th, April, 2020
https://www.hindustantimes.com/india-news/coronavirus-lockdown-phase-1-ends-phase-2-begins-summary-of-india-s-fight-against-covid-19/story-8T4ImD243kl3SmCSnWFliJ.html

public institutions that facilitate the day to day iteration of the socio-economic and political lives of people. Meanwhile, most states and market based institutions have responded by framing policies by defining essential and non-essential work, work from home, quarantine lists and compliance through policing by public and para-state institutions, etc. We assess these changes and processes through the idiom of myriad risks that are being engendered due to the pandemic in India. The emphasis of this piece though would be on *how India has deployed digital Contact Tracing for effectively containing the COVID-19 infection*. The embedded politics within which Aarogya Setu is conceptualized would be described by analyzing the prevailing socio-political and economic risks, as well as accentuated health and informational risks propelled by the pandemic in the state's policy response.

Contact tracing - which is a process of identification of persons who may have come into contact with an infected person to isolate and treat the infected, in order to reduce infections in the populations - has been recognized as a standardized mechanism to tackle severe health crisis in the past as well (Arakpogun et al. 2020).[4] The WHO itself, by calibrating its policy recommendations to states, stressed on the need to tackle the pandemic at *best efforts basis* and has identified contact tracing as a key component to address the inherent risk from COVID-19 infection on a mass scale and prevent 'community spread' amongst people (Deb, 2020). However, it is only with the emergence of the COVID-19 in the year 2020, that digital contact tracing (DCT) applications have been developed around the world such as, *Covid Shield* in Canada, *Covid Community Alert* in Italy, *Trace Together* in Singapore (MIT Study 2020). However, the rapid deployment of these privacy intrusive technologies, without

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[4]For instance, tuberculosis, measles, ebola are some of the other contagious diseases where contact tracing has been pushed as a vital method to contain the spread of infection.

stressing on the modalities to generate trust around their personal health information and evidence-based physical tracing for quarantine and self- isolation of those infected is evident as the scale of infection and deaths caused by COVID19 continue to rise worldwide.

In the context of India, Aarogya Setu is one of the '*contact tracing, syndromic mapping and self-assessment*' applications, which has been primarily designed for use on a smartphone, since several state governments have also developed their own digital variants of contact tracing. The application has been developed by the National Informatics Centre [NIC] under the Ministry of Electronics and Information Technology (MeitY). The digital service saw its initial release in April 2020, after which stable versions were released in May, 2020 for Android, iOS, and KaiOS interfaces.[5] However, there have been concerns raised on the data protection safeguards within the app since it is considered intrusive to not only to user's information but also their bodies and locational privacy. The app while recording crucial health information promises a cutoff for data destruction, it is mandatorily imposed on many actors, collects data beyond the stated purpose with no minimization standard and is not completely open source.

This work draws upon the Aarogya Setu, a DCT used to contain the COVID19 pandemic from the prism of two theories - *Risk society* and *Politics of Artefacts*. In the former, we attempt to trace the COVID19 pandemic not just as a health crisis but also as containing socio-economic and political risks that are emergent given the policy responses adopted by the Union government of India and its apparatuses. Whereas in the latter, we look into the political and cultural embodiment of the Aarogya Setu application as being

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[5]PTI, Contact Tracing app Aarogya Setu now available on Jio phone model, LiveMint, 14th May 2020 https://www.livemint.com/technology/apps/contact-tracing-app-aarogya-setu-now-available-on-jiophone-model-11589456657523.html

embedded in the above given context of risk society. Additionally, we also delve into the privacy and ethical implications of the Aarogya Setu app arguing that it is capable of engendering further risks. Moreover, unlike earlier studies that looked at technology as something which is intelligible only through the meanings that human beings confer upon them, we attempt to demonstrate how technology is not static and encompassed within a black box. Rather technology is fluid and very much emergent or in-the-becoming.

In regard to the above given expositions, we ask: In what ways has the COVID19 pandemic magnified existing risks and engendered novel risks in India? Does the Aarogya Setu app deploy the socio-cultural, political and economic risks engendered by the COVID19 pandemic? Are these risks embedded in the design of the app to enable effective contact tracing policies or are they a technocratic reflection of the existing majoritarian politics practiced by the state and its apparatuses? Whether these risks within such pervasive digital tools are a reflection of an 'inherently political' technology in context of privacy and data protection of user's personal information? Whether a deeper enquiry is required to minimize the threat from such intrusive technologies in light of rampant datafication of lives? This work will further contribute to scholarships that are intended to understand the complexities of the risks generated due to the pandemic and growing technological determinism. It also seeks to contribute to works that look into digital contact tracing applications and the pervasive ramifications of their use.

Risks Engendered by the Covid-19 Pandemics

Ulrich Beck (2006) in his seminal paper - 'Living in a World Risk Society' explores the irony that lies in the form of global risk. This irony is encapsulated in the fact that risk is itself an actor which is socially constructed through a scientific temperament within techno science itself (Van Loon 2002). The risk involves the recent pandemic of COVID19, which is a biological disaster, arises from

what we do not know and cannot calculate. It engenders a heap of uncertainty and helplessness as we deal with something which cannot be resolved by using calculated decisions and thus, remains unknown to us. The virus which confronts us within the risk is revealed as an actor that has an outward effect on the society in multiplicities. In turn, this narrative of irony also deals with the "highly developed institutions of modern society- *science, state, business and military-* [in an] attempt to anticipate what cannot be anticipated" (Beck 2006). All these institutions are there to curtail the spread of the virus and moulding each other through inner workings of its constitutions.

It is imperative to mention the crucial distinction between risk and *catastrophe* that Beck so deafeningly states in the paper. He says, "Risk does not mean catastrophe. Risk means the "*anticipation* of catastrophe" (ibid: 332). He goes on further saying that once risks cease to be risks and become catastrophes, they move elsewhere: "to the anticipation of further attacks, inflation, new markets, wars or the reduction of civil liberties" (ibid). Moreover, risks are not risks "without techniques of visualization, without symbolic forms, without mass media etc.," (ibid). The irony is strong here since "the promise of security made by scientists, companies and governments [further] contributes to an increase in risks" (ibid).

The new risks are increasingly produced by humans themselves which is leading towards a loss of faith in the very institutions of modernity. Moreover, the rational agent does not need God anymore to deal with the risks. They would resort to reason to understand, define and tackle the risks. In fact, like Van Loon (2002) argues – humans do not need God but wherever they do, they define God as well (according to the situation they are subjected to). Hence, the pandemic could be seen as an occurrence which is abrupt, and leads to fully unconscious confrontation with the apparently excluded. The virus is an 'invisible enemy' and the fight to eradicate it would lead to newer forms of risks. This is the paradox. While the effects of this humanitarian crisis exist due to the prevailing state of the economy, the lockdown due to the pandemic and the abrupt

response policies of the state machinery, most governments have sought to tackle the pandemic using metaphors of emergency.

For instance, the Indian state in order to frame coherent policies to tackle the COVID19 virus on a war footing, decided to rely on colonial laws like the Epidemics Diseases Act, 1897 and Section 188 of the Indian Penal Code and emergency legislations such as the Disaster Management Act, 2005.[6] The modes of controlling and preventing the virus thus have draconian colonial legacies which had been used in the past to segregate, isolate and confine people during epidemics. Chakrabarti (2020:1) notes that these measures include "legal provisions used for control, the development of experimental vaccines, the tracing of asymptomatic carriers, the asymmetrical social and economic consequences, and the violation of basic human rights, particularly those of the poor and marginalized communities". Despite healthcare being a state subject under List II of the Constitution and previous experiences of epidemiological and infectious disease control stressing on the need for decentralized community based interventions, the COVID19 risk regulation strategy has been overtly centralized. This again goes back to the colonial mould within which the very same Epidemic Diseases Act 1897 gave special centralized powers to the state.[7]

The risk is being framed as a trade-off between saving lives versus saving livelihoods in a consequentialist manner to be addressed with an authoritarian imposition of lockdown. The advent of the pandemic has also culturally magnified certain risks of stigma,

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[6]Ram Mohan, M.P. & P. Alex, Jacob. COVID-19 and the ambit of the Disaster Management Act. The Week, 26th April, 2020.
https://www.theweek.in/news/india/2020/04/26/covid-19-and-the-ambit-of-the-disaster-management-act.html

[7]Explained Desk, Explained: Govt invokes Epidemic Diseases Act, 1897 to fight coronavirus; what is it?, Indian Express, 12th March, 2020
https://indianexpress.com/article/explained/explained-w hat-is-the-epidemic-act-of-1897-govt-has-invoked-to-fight-coronavirus-6309925/

based on how 'social distancing' is a necessary safeguard against the infection.[8] Such framing by state officials and policies has facilitated class, caste, ethnicity and religion based discrimination amongst the populace and led to the targeting of certain communities as active carriers of the virus. At the same time, the risk is also downplayed by the state machinery, who keep relying on cultural symbols, traditions and practices of the Hindu religion, to comfort the masses that they will be secure from the infection. Such cultural markers are also visibly promoted in the e-governance agenda, through television and digital mediums such as the app and platform based economy, highlighting the propaganda machinery of *hindutva based development* model imbibed by the state. For instance, the Uttar Pradesh government has launched an app called *Ayush Kavach* that provides tips to boost your immunity using Ayurveda products and keep COVID19 at bay.[9]

1. Political Risks and Social Risks

Numerous instances of grave violation of civil liberties were visible during this period highlighting the authoritarian outlook imbibed by the state in its lockdown policies. Such measures might lead to what we term as *political risks* and *social risks* for certain populations. Political risks encompass instances such as - opaque accountability mechanism for ventilators, PPE kits, and quarantine centres through the PM Cares Fund; targeting of dissenters with draconian legislations like the Unlawful Activities Prevention Act or UAPA; extra judicial powers granted to police and community leaders to

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[8]Chandrashekhar, Vaishnavi. From leprosy to COVID-19, how stigma makes it harder to fight epidemics. Science Magazine, 16th September, 2020. https://www.sciencemag.org/news/2020/09/leprosy-covid-19-how-stigma-makes-it-harder-fight-epidemics

[9]PTI, Yogi Adityanath Launches App That Helps Boost Immunity Through Ayurveda. NDTV, 6th May, 2020 https://www.ndtv.com/india-news/yogi-adityanath-launches-ayush-kavach-app-that-helps-boost-immunity-through-ayurveda-2223948

enforce lockdown against violators; and absence of parliamentary scrutiny and judicial review on executive policies framed to tackle COVID19. Such non participatory measures have isolated people as effective stakeholders from policy making for tackling a surging pandemic, which requires a cooperative and consultative response. Agamben (Caldwell 2020) argues that the pandemic has engendered the adoption of rudimentary standards for implementing lockdowns and the centralized decision making citing 'the state of exception' and severely undermining democratic values that people cherish.

The rise in technocratic and securitized policies since the advent of the pandemic to avoid risk of infection to entire populations has magnified the existing '*structural violence*'[10] embedded within the institutional apparatuses of the state (Galtung 1969). Rising inequality and discrimination of marginalized groups are the social risks produced by such an apathetic political response to the exacerbating situation produced by the pandemic. Such risks are brought out in instances where - migrant workers were seen to be sprayed with chemical disinfectants; a lot of migrant workers reduced to asymptomatic carriers of disease were restricted from returning home while they faced starvation in the cities due to lack of work; international travellers and visitors being assaulted by vigilantes; usage of unproven hydroxychloroquine as a prophylactic against COVID19 for slum dwellers, police, other frontline health workers; witch-hunt of Tablighi Jamaat and the Muslim community in general as carriers of the novel virus; the phraseology of 'social distancing' exacerbating stigma and caste based discrimination towards certain people; rise in the cases of domestic abuse and other gender-based violence, etc.

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[10]Structural Violence is a term which has been noted by John Galtung as being a form of violence whereby social structures or institutions may harm people by preventing them from meeting their basic needs.

2. Economic Risks

Further, the sudden imposition of lockdown accentuated grave *economic risks* such as recalibration of workspaces and labour rights as well as adoption of heightened neoliberal policies that has led to severe exploitation of workers and mass unemployment. The Modi governments' solution to these crises relies on an apparently robust holistic scheme called '*Atmanirbhar Bharat*' which literally means 'Self-reliant India'. It alludes to freedom, autonomy and self-determination. The discourse of Atmanirbhar Bharat can be understood in three senses: Firstly, it could support a discourse related to the self-reliance of the communities that are geared towards environmental and social sustainability; Secondly, it could denote 'entrepreneurialism' and the promotion of 'entrepreneurial culture' based on a neoliberal design; Thirdly, it could mean a socialist policy to develop national industry and independent economy (Tripathy 2020). However, in the current context, the second definition bodes well i.e., Atmanirbhar Bharat being a new buzzword to push forward the global neo-liberal agenda. The neoliberal discourse is further accentuated in the context of an increasing dependence of the Modi government on higher Foreign Direct Investments. Thus, the government's self-reliance is a mockery of localized production due to its heavy reliance on imports.

The imposition of lockdown led to the decline of the GDP quarterly rate to -23.9%, plunging into economic meltdown and loss of employment for many in the informal sector.[11] However, the economic risk existed prior to the advent of the pandemic due to regressive economic policies such as demonetization, enactment of Goods and Services Tax, the rising non-performing assets with

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[11]Misra, Udit & Iqbal Nushaiba. India GDP growth contracts 23.9%: What is the economics behind the math? The Indian Express. 6th September, 2020 https://indianexpress.com/article/explained/gdp-contraction-23-9-the-economics-behind-the-math-6578046/

banks, disinvestment from Public Sector Undertakings, collapsing farm incomes, etc. However, irrespective of the rising COVID cases, the Unlock policies reflect a jump to kick start the economy with no strategy of containment of virus and mere dependence on people to comply based on technocratic tools like Aarogya Setu app.

3. Health Risks

In India, along with the drowning economy, the face of a failing public health infrastructure has also been made visible that alludes to the *health risks*. These drastic revelations require a rational long-term response to the crisis by making fundamental changes to the economy and healthcare systems. Economically, it would require distribution of wealth and resources more equitably. It would also mean giving up relying on the neoliberal economic policies that the government espouses. Secondly, a robust change in the healthcare system is required which would provide equitable access to all regardless of their economic and social standing. Instead the other risks mentioned above lead to a magnified transfer of extreme individualization and self-securitization onto the citizens of India.

The health risk posed by COVID-19 is being reified and monetized by insurance companies, especially with the launch of COVID Kavach and COVID Rakshak policies to allow insurers to claim medical insurance for treatment in case he/she contracts the infection.[12] The lack of a coherent testing strategy - RT-PCR or rapid antigen test - across states and the populations on whom such tests were conducted is missing from the government health policies

[12]TNM Staff. Explained: COVID 'kavach' and 'rakshak' health insurance and who should opt for it. The News Minute, 13th July, 2020.
https://www.thenewsminute.com/article/explained-covid-kavach-and-rakshak-health-insurance-and-who-should-opt-it-128541

framed.[13] The lack of availability of beds, rampant rise in infections and deaths of healthcare staff and workers, ill-targeted interventions in hotspots, no fixed policy on quarantine centers, minimum emphasis on subsidizing treatment costs as well as inefficient disposal of medical waste shows the crumbling of public health infrastructure in India amidst the pandemic. On the other hand, the state has encouraged greater privatized health prescriptions, especially in the context of telemedicine, instead of building capacity of auxiliaries, midwives, self-help groups and doctors through the existing public health apparatuses such as Sub centers, Primary Health Centers, Community health centers, District hospitals and super specialized units.

While the positivity ratio of COVID19 is low compared to its population, India is still bearing the burden of high caseload of infections across the world. The logic of herd immunity is seen to be redundant as several countries have also reported second waves of the pandemic affecting the same people. The community spread in India is very apparent but the government is apathetic to these concerns of health. This is coupled with the lack of medical equipment and delay in payment of salaries to ASHA workers, nurses and resident doctors at public hospitals.[14] The lack of accessible information and data on health policies and guidelines as well as disparities in the number of rise in infections and deaths on a daily basis indicates minimal accountability on part of the government addressing a global pandemic.

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[13]Kang Gangandeep, Muliyil Jayaprakash & R. Babu Giridhar. What 3 experts find most frustrating about India's handling of the COVID-19 pandemic. The Indian Express, 30th September, 2020

https://indianexpress.com/audio/3-things/what-3-experts-find-most-frustrating-about-indias-handling-of-the-covid-19-pandemic/6636255/

[14]Dayashankar, K.M. No wages for ASHA workers. The Hindu, 21st April 2020.
https://www.thehindu.com/news/cities/Hyderabad/no-wages-for-asha-workers/article31399797.ece

Given the above background, it can be argued that the discourse of *Atmanirbhar Bharat* is a sort of defining moment of the risk in the context of India that reeks of the neoliberal value of extreme individualization. The growing technocratization of public services such as education, health, banking, subsidy benefits, transit passes, etc., has led to engendering citizens as legible for the state that provides these goods. This makes the information and public delivery of the state reduced to those peoples who can access internet and mobile based technologies. Such form of delivery magnifies the digital divide due to bureaucratic errors or barriers to inclusion which certain populations face, especially when the response of the state must be uniform.

4. Informational Risks

Technology, especially in the form of E-governance, is seen as a silver bullet and has emerged as an impetus to achieve more efficient outcomes. Such an approach allows the state with support of capital to commodify information around our body, lives and spaces into a resource for profit maximization. In practice, the latter has further become more entrenched in the discourses of nationhood.

For instance, the 'Digital India' campaign started by the government of India is an extremely relevant example here. The campaign aims at ensuring that government services are made available to citizens electronically by improving digital infrastructure and by increasing internet connectivity.[15] In short, there is an attempt to make India a technologically empowered country. However, the underlying assumption of the 'technological empowerment' discourse is rooted in what we term as 'technological determinism', where there is certain linearity in the outcome towards either something good or bad. The neoliberal agenda pushes forth the

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[15]Jose, Tojo. What is Digital India? IndianEconomy.net, 22nd January, 2017 https://www.indianeconomy.net/splclassroom/what-is-digital-india/

E-governance model, which facilitates private entrepreneurs and giant monopolies a wide space to provide public goods like education, banking, healthcare, social security etc. Such a model of governance was critiqued by the Supreme Court in the *Aadhaar case* by reiterating its' not mandatory status for providing public goods and services due to exclusionary biases embedded in its technocratic structure.[16]

There is individualization of the body and the spatial-temporal situation of the citizens of India which can be traced the best in the context of the newly emerged Digital Contact Tracing (DCT) applications along with which another form of risk exemplified as the *informational risk* comes about. However, it is imperative that we first discuss the DCTs in the context of the risk society and what it entails in relation to the neoliberal agenda of self-securitization (Sundar 2010).

DCTs are not the only carriers of informational risk but also the medium that mimics the media highlighting certain practices and discourses, which has the power to shape the national interest also forms part of it. The Aarogya Setu app is a great example which can be unboxed and described through its parts. The app which is released to protect the individual from the risk of infection is becoming more and more redundant with rise in COVID19 cases. It couples the inefficient state response to restrict the spread of infection while covertly acting as an intrusive technology that collects personal and health information of users, putting their privacy and bodies at risk. The next segment will highlight the hidden politics embedded in this controversial 'artifact' that mirrors the aforesaid risks.

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[16]Writ Petition (Civil) No. 494 of 2012 (2018) https://sflc.in/updates-aadhaar-final-hearing/aadhaar-judgement

Analysing the politics of digital contact tracing tools as artifacts within a risk society

Aarogya Setu, India's COVID-19 'contact tracing, syndromic mapping and self-assessment' application, has been modelled from apps around the world, such as 'Covid Sheild' in Canada, Covid Community Alert in Italy, Trace Together in Singapore etc. Similarly, other local variants can also be found within India itself. For instance, GoK Direct in Kerala, Mahakavach in Maharashtra, COVA Punjab in Punjab, Quarantine Watch in Karnataka, Test Yourself in Goa and Puducherry, etc. The politics within the Aarogya Setu app can be assessed from two prisms: one, how it is different from other contact tracing apps given the cultural markers it embodies; two, how yet the app is embodying the political nature of other digital contact tracing tools as highly intrusive to personal information. While the endeavour to utilize these tools has been effectively to trace, locate and identify the infected person amidst a global pandemic for the users to avoid the risk from Covid-19, the ineffectiveness of these tools without community medicine and physical tracing is self-evident, especially in the context of India.

In order to assess the politics of Aarogya Setu we can bring about Langdon Winner's argument that artefacts have politics. Winner espouses that technology embodies social relations i.e., power. Social Construction of Technology (SCOT) theorists talk about how culture affects technology. Winner (1980) takes off from here to add something more to the story about technology. He says that while technology can be determined by what social and economic system it is embedded in; it can also affect the way we act. The technology has certain politics embedded in it which can be found within its design. He says that technology is like a legislative act since it establishes a public order. Instead of being a means to the end, technology has a tendency of becoming the end in itself. This eagerness to interpret technical artefacts in a political language is also used by those who support the notion that this utilization of technology by the scientific community and industry players is meant

to foster democracy, freedom and justice. However, for Winner what matters is not the technology itself but the socio-economic determination of technology based on its development, deployment and use.

A MIT study (2020) reviewed around twenty-five DCTs from across the world. Their framework included five criteria to judge on which part of the spectrum the app falls i.e., whether the app is authoritarian or democratic. The criterions are: *Voluntary, Limited, Data Destruction, Minimized, and Transparent*. Apps like COVID Alert* (Canada), Smittestopp (Denmark), Rakning C-19 (Iceland), Immuni (Italy), Trace Together (Singapore) etc., checks all the five yardsticks. Whereas apps like NHS COVID-19 App (U.K), Morchana (Thailand), Chinese Health Code System (China) etc., fall on the other extreme end of the spectrum where they do not check any of the given yardsticks. The former set of applications are inherently by design are way more democratic than the latter set of apps. In juxtaposition to these apps, the Aarogya Setu checks only two points – *data destruction and transparency*.

In another article,[17] the Aarogya Setu app has been compared with its U.K. counterpart - NHS Covid-19 App by taking into factors such as *transparency, privacy, and approach towards implementation*. In context of transparency of the app, they argue that while the Indian government has a policy of open source software, Aarogya Setu's code has not been disclosed. Whereas the NHS application is open sourced where the code is available for the software community to examine and fix the vulnerabilities, if needed.

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[17]Mozika, Aditi & Soni, Manish. Privacy in a Pandemic: A Comparison between the Contact Tracing Applications of India and the United Kingdom, LSE Human Rights, 12th June, 2020
https://blogs.lse.ac.uk/humanrights/2020/06/12/privacy-in-a-pandemic-a-comparison-between-the-contact-tracing-applications-of-india-and-the-united-kingdom/

Another point is the voluntary nature of the applications. The NHS app is completely voluntary whereas Aarogya Setu has been made compulsory for several classes of people, while in some instances, non-installation of the app has been made into a punishable offence.[18]

Moreover, it is interesting to see how Aarogya Setu provides the option to its users to give consent to its 'Terms and Conditions' only after the registering has been done. The nature of data collection between the two apps has also been compared. The NHS only asks for the users' postcode, the phone model and information relating to Bluetooth usage. Whereas Aarogya Setu also collects users' sensitive personal data such as name, age, travel, and medical history, profession and location, all of which is recorded on a central cloud server.[19] Moreover, the information that is collected by the government from Aarogya Setu *"may be shared with such other necessary and relevant persons as may be required in order to carry out necessary medical and administrative interventions."* Here, the use of the 'may' grants unlimited discretion[20] to the application developers regarding the usage and sharing of data.

Aarogya Setu must be seen as embodying the above given risks where the politics of the app encompasses its socio-technical

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[18]Methri, Gloria. Not Installing Aarogya Setu App Becomes Punishable Offence In UP's Gautam Buddh Nagar, Republic World, 6th May 2020.

https://www.republicworld.com/india-news/law-and-order/not-installing-aarogya-setu-app-becomes-punishable-offence-in-up.html

[19]Mathew, Ashlin. Aarogya Setu is a surveillance app, will not help those who are most vulnerable to COVID-19, say experts, National Herald, 17th April, 2020.

https://www.nationalheraldindia.com/india/aarogya-setu-is-a-surveillance-app-will-not-help-those-who-are-most-vulnerable-to-covid-19

[20]Sangomla, Akshit. COVID-19: Experts raise privacy concerns about Aarogya Setu app, Down To Earth, 14th April, 2020

https://www.downtoearth.org.in/news/science-technology/covid-19-experts-raise-privacy-concerns-about-aarogya-setu-app-70453

designs. First, there is the problem of self-securitization where the individual is transferred the responsibility to be safe from the COVID19 virus. This is done by checking whether the user is safe from other people who might be carriers of the infection. The app uses Bluetooth and GPS tracker to assess the probability of risk involved in the process. There is a certain disciplining of the body where it adheres to the map that has been given to it. In doing so, the app does not only invade the privacy of the body but there is also the spatial and temporal invasion that occurs. On the other end of the spectrum of this invasive nature of the app lies in the fact that it also makes our bodies' as quantifiable data (Kovacs 2019) which is then uploaded on the government servers. Whether or not the microorganism resides in our body, the uploaded data remains as a marker of our incurred private activity by the state through digital technology across spatial and temporal planes.

Second of all, the problem lies within the cultural and political symbols which are displayed on the app in the form of information, notification, advertisement, and call for donation or advocacy. The above mentioned colonial measures to prevent and control the epidemic lie behind these markers and cull out certain cultural impositions from the standpoint of the fascist alt-right movements that call for a *hindutva* project within India and abroad. Langdon takes inspiration from Lewis Mumford's (1964) writing on authoritarian and democratic techniques in theorizing about technology. For Mumford, the former are machine-oriented, centralized, hierarchical and coercive whereas the latter tends to be more person-centered, independent and decentralized. While Aarogya Setu can be called person-centered, the imposition of cultural markers from the centralized power that is rooted in an ideology makes it susceptible to political opaqueness.

The mediated information in the form of campaigns and strategies tell a tale. For instance, #CoronaSolidiers or #MaskForce or #IndiaFightsCorona. #MannKiBaat is also an exclusive part of the app where Prime Minister Narendra Modi takes up a topic to speak

about. In the context of the app, the conversations are mostly centered on the fight against COVID19 and the impervious tackling measures that India is taking against the novel virus in this fight. He talks about how the COVID19 recovery rate is better in India as compared to other nations whereas in reality, India has not achieved the recovery rate that would allow the curve to flatten and dip as has happened in many other nations which were ravaged by the virus.

The mode of redressal is a humanitarian crisis rather than being framed in an empathetic manner to take the concerns of migrant workers or those carrying out essential services are relegated into a spectacle since they are either excluded or targeted due to the determinism embedded in these technologies. The technological intervention through Aarogya Setu overshadows other concerns of digital divide, low literacy in accessing technology as well as the threat of privacy and data protection, since the app is eulogized as a necessary tool. Thus, the risk despite being biological in nature, adopts a technological form to facilitate greater socio-economic and political risks, making it difficult to exercise rights as peoples equally prone to the infectious virus.

Privacy Implications and Datafication of lives

There is a growing need to bring the debate on data protection and privacy on how it constructs bodies and spaces at a time where there is an increased datafication of our lives. The monitoring of health data through novel technological tools like the National Health ID register under the National Digital Health Mission and Aarogya Setu have shifted the debate beyond informational privacy to larger concerns of civil liberty by categorizing bodies and spaces as markers for regulation, without adherence to principles of free prior informed consent, reasonableness and proportionality while collecting such data. The increasing opacity in such governance responses to monitor personal information of users makes it necessary to bring people and their bodies at the center of the debate to ensure they face no undue harm in the present or future. It is imperative to note that the unbridled

datafication of intimate aspects of peoples' lives and such reconfiguration by states and private sector alike towards such models using smartphone technologies or the internet is a reflection of the phenomena termed as '*Surveillance Capitalism*' (Zuboff 2019).

Zuboff argues that such forms of information which are collected, monitored and utilized by these entities categorizes persons as prediction products that anticipate how behaviour of these persons can be manipulated in time. Such 'prediction products' are traded in what Zuboff identifies as *'Behavioural Future Markets'* (ibid). Kovacs (2020) argues such a classification by these entities reconstruct our persons and bodies as mere instrumentalities for the purpose of commodification by others rather than as possessing rights as an end. This disconnects how personal information is experienced by people and their bodies as a part of their being and drives towards the increasing categorization of data as a resource.

The standard for a holistic right to privacy was enunciated by the Supreme Court in *KS Puttaswamy v Union of India*[21], which emphasized not merely protection of informational privacy of individual persons but also extending to the bodily integrity of an individual and spatial interactions they engage within. While the decision recognized that a pandemic could cause a legitimate purpose to seek private information of citizens, it recognized four key indicators to ensure such an action is not data intrusive: legality, necessity and purpose, proportionality and in-built procedural safeguards (Bhandari et. al. 2017). While within the Aarogya Setu app, a vague reference to legality is made by stressing on it being governed by all laws of India, the Minister for Electronics and Information Technology has stated the app is premised on the Draft Personal Data Protection Bill, 2019.[22]

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[21][(2017) 10 SCC 1].

[22]PTI, Aarogya Setu is absolutely robust, safe and secure: IT Minister Ravi Shankar Prasad, The Print, 6 May 2020, Accessed at: https://theprint.in/india/arogya-setu-is-absolutely-robust-safe-and-secure-it-minister-ravi-shankar-prasad/415583/

Furthermore, the app may fulfil the data anonymization standard and has assured data destruction within a cut-off date, but has no safeguards on the location based tracking embedded in the nature of the app, thus violating the reasonable standard of proportionality. Deb (2020) elaborates that the legitimate purpose for which the app is designed is not fulfilled, while at the same time, the intrusive data usage and excessive information demanded by the app, makes it a grave threat by restricting the civil rights of the users. The app also does not take any responsibility for false information and relies on promoting individual self- assessment as the most efficacious method to curb the pandemic, despite no evidence to prove the same. Beyond collating the personal details such as name, sex, travel history, health condition, the app relying on Bluetooth and GPS data traces the location of users, raising fears of facilitating mass surveillance by state or lateral surveillance by communities and people. Furthermore, since it also takes health information of users, it severely jeopardizes the bodily privacy of individuals as the information can be utilized by private healthcare or telemedicine companies and convert them into consumers in this risk society.

While courts and Justice BN Srikrishna have reiterated without legislating a robust data protection law the Aarogya setu app cannot be forced onto people,[23] the Union government has callously pushed for best effort basis by mandating certain actions requiring the download of the app. It is pertinent to note since the declaration of the

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[23]Special Correspondent, Karnataka HC orders issue of notice to Centre on 'Aarogya Setu' app, 4 June 2020, The Hindu, Accessed at: https://www.thehindu.com/ news/national/karnataka/karnataka-hc-orders-issue-of-notice-to-centre-on-aarogya-setu-app/article31750104.ece; See also, Scroll Staff, Covid-19: Order on mandatory use of Aarogya Setu app is 'utterly illegal', says former SC judge, 12 May 2020, The Scroll, Accessed at: https://scroll.in/latest/961736/covid-19-order-on-mandatory-use-of-aarogya-setu-app-is-utterly-illegal-says-former-sc-judge

open source code of the app in May, the app has been in constant evolution[24] with developers and hackers being given the opportunity to fix the bugs within the code and make it more robust and effective in tracing. However, many privacy experts have written to the MeitY regarding the veracity of the open source claim as it has been only provided from client side and not from the server side, which diminishes the stance of the government that the app safeguards the privacy of the users and does not instill faith in promoting a transparent data framework.[25]

Thus, the app despite assurances from the state is not a robust mechanism to curb the infection of COVID-19 rather an insidious tool to capture health related information highlighting the redundancy of the app. Nonetheless, the state is not keen to invest in public healthcare infrastructure, quarantine centers and community medicine techniques to trace, isolate and treat the virus effectively by curbing its spread. By relying on #AtmanirbharBharat discourse, it is another mode through which the state is absolving itself to ensure healthcare related issues will be addressed through public expenditure and passing the buck to private players to tackle the spread of infection. The app is another tool available with the state to enable the promotion of private healthcare apparatuses through the promotion of self- securitization from the prism of an individual for a health risk of COVID19 by relying merely upon self- assessment and testing. This trade-off of privacy versus security, rooted in the premise that if the state must ensure personal information is protected, then it cannot provide the health security risk the virus poses and vice versa, negates individuals from experiencing their right to life under Article 21 of the Constitution of India to the fullest.

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[24]See, https://aarogya-setu.en.aptoide.com/versions; https://apkpure.com/aarogya-setu/nic.goi.aarogyasetu/versions

[25]See, SFLC.IN's letter to MeitY regarding fully open sourcing Aarogya Setu, 14 August 2020, Software Freedom Law Center, Accessible at: https://www.sflc.in/sflcins-letter-meity-regarding-fully-open-sourcing-aarogya-setu

Thus the citizen, who possesses rights as per the Constitution of India, is forced to alienate them while the judiciary determines which right is urgent enough to be remedied. The growing reliance upon technocratic modes of evidence and expert determination in most cases for adjudication by courts reflects a growing abeyance of rule of law to rule by technology and its acceptance for producing optimum outcomes for dispute resolution albeit not entirely just or fair (Faulkner 2012). Much like in the *Aadhaar case*[26], courts have preferred not to intervene in aspects wherein technological modes have been relied upon to address gaps in policy and implementation of public welfare schemes. Such a trend is evident as the COVID19 responses of the state in context of health, education, economic relief packages or even for access to justice to adopt online modes has rarely been questioned as inequitable and unjust by courts while hearing pleas for violation of rights due to these measures.

Conclusion

This piece has sought to highlight the exacerbating COVID19 pandemic crisis in India from the reference of a multidimensional risk society that keeps magnifying greater risks through its operation. The emphasis on '*precaution through prevention*' (Beck, 2006) through adoption of technologies of control by the state for the incumbent risk of the pandemic is deeply political on whom it protects while isolating the others. The violence engendered by DCT tools like Aarogya Setu severely hampers the civil liberties of people due to its patent illegality, disproportionate collection of personal information, opaqueness, flawed consent framework and disciplining endeavour, thereby violating the privacy of users.

It has been our endeavour to highlight the embeddedness of the platform economy with the ideology political establishment in neoliberal India today in this piece. We have argued that the

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[26]Supra note 16.

determinism rooted in this app based model of governance not only promulgates a cultural embodiment of *hindutva based development* but also fosters newer risks to those on the outliers of the populist mandate received by the government. The COVID19 pandemic thus becomes an inflection point where existing socio-political and economic risks find new conduits to magnify itself. The Aarogya Setu app is another '*inherently political*' apparatus that magnifies these risks as well as creates grave technological risk in the guise of safeguarding the user from the health risk of the pandemic. We have sought to delineate some of the grave privacy implications the app fosters and identified the technological risk of surveillance that is rooted within its design. The promulgation of the app by state and private actors through official notifications or guidelines has led to widespread use and acceptance by users as well as in some instances led to forcible sharing of data to access public services.

It is imperative to develop strategies and tools that do not view the right to privacy as an impediment while providing public services through technocratic policy interventions. There is a need to imbibe '*data justice*' while designing these tools with special emphasis on reducing access and literacy barriers to technologies for an equitable and just adoption (Dencik et. al., 2016). For instance, DCTs must operate in a decentralized paradigm with localized data destruction without any prejudice against marginalized communities. The pleas of essential workers reflect that such technologies must not be used as a tool to surveil them but rather make them stakeholders by allowing them to report, monitor, suggest and voice their grievances through the platform. There is a need to integrate the DCTs with community health interventions and rigorous testing to effectively tackle the epidemiological risk and allied risks posed by the COVID19 pandemic. To safeguard democratic values, we must ensure the state does not keep adopting intrusive technologies, like the Aarogya Setu app, by building collective solidarity and resistance strategies with privacy and digital rights activists, essential workers like healthcare staff, sanitation workers and gig employees as well as marginalized groups.

References:

Arakpogun, E. O., Elsahn, Z., Prime, K. S., Gerli, P., & Olan, F. 2020. Digital contact-tracing and pandemics: Institutional and technological preparedness in Africa. *World Development, 136*, 105105. doi:10.1016/j.worlddev. 2020.105105

Beck, U. Living in the World Risk Society. *Economy and Society*, 35(3), 329-345.2006.

Bhandari, V., Kak, A., Parsheera, S., & Rahman, F. . An Analysis of Puttaswamy: The Supreme Court's Privacy Verdict. IndraStra Global, 11, 1-5. https://nbn-resolvin2020g.org/urn:nbn:de:0168-ssoar-54766-2.2017

Chakrabarti, P. Covid-19 and the Spectres of Colonialism. *The India Forum*, 14th july 2020

https://www.theindiaforum.in/article/covid-19-and-spectres-colonialism accessed on 10/3/2020

Caldwell, C. 2020, August 21. Meet the Philosopher Who Is Trying to Explain the Pandemic. Retrieved September 30, 2020, from https://www.nytimes.com/2020/08/21/ opinion/sunday/giorgio-agamben-philosophy-coronavirus.html

Deb, S., 'Public Policy Imperatives for contact tracing in India' .April 11, 2020. IFF Working Paper No. 3/2020. Retrieved on September 10, 2020, from https://docs.google.com/ document/d/1nDoPzygQy TetEguOlzula5O9y5f3f5YJDsA2 Pd99O6U/edit

Dencik, Lina, Arne Hintz, and Jonathan Cable.2016. "Towards Data Justice? The Ambiguity of Anti-Surveillance Resistance in Political Activism." *Big Data & Society*.

Faulkner, A., Lange, B., & Lawless, C. 2012. Introduction: Material Worlds: Intersections of Law, Science, Technology, and Society. *Journal of Law and Society*, 39(1), 1-19. Retrieved September 10, 2020, from http://www.jstor. org/ stable/41350295

Galtung, Johan.1969. "Violence, Peace, and Peace Research" *Journal of Peace Research*, Vol. 6, No. 3 , pp. 167–191

Kovacs, Anja. 2020, August 6. Power to the People. Internet Democracy Project. Retrieved September 30, 2020, from https://www.youtube.com/watch?v=HV6auKTdBSw&ab_channel =MediaNama

Kovacs, Anja. 2019, May 28. When our bodies become data, where does that leave us? Retrieved September 30, 2020, from https://deepdives.in/when-our-bodies-become-data-where-does-that-leave-us-906674f6a969

Loon, J. V. . *Risk and technological culture: Towards a sociology of virulence*. New York: Routledge.2002

Mumford, L. 1964. 'Authoritarian and Democratic Technics', Technology and Culture, 5(1), 1-8. Tripathy, H. V. 2020, July 20. Why The Modi Government Is Pushing The Idea Of Atmanirbhar Bharat. Retrieved September 30, 2020, from https://madrascourier.com/ opinion/why-the-modi-government-is-pushing-the-idea-of-atmanirbhar-bharat/

O'Neill, P. 2020, August 07. A flood of coronavirus apps are tracking us. Now it's time to keep track of them. Retrieved September 30, 2020, from https://www.technologyreview. com/2020/05/07/1000961/launching-mittr-covid-tracing-tracker/ Winner, L. 1980. Do Artefacts Have Politics? *Daedalus, 109*(1), 121-136.

Zuboff, S. *The age of surveillance capitalism: The fight for a human future at the new frontier of power*. New York, NY: PublicAffairs.2019.

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