

THE INTERFACE AS A LOCUS OF KNOWLEDGE GENERATION

"I see the interface as the space where people's lived experience of the state is shaped."

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Introduction

Why do you spend so much time in ration shops?

This is a question that I received frequently during my fieldwork on social protection programmes. My research has long been centred on India's Public Distribution System (PDS), the largest food security programme in the nation, whose origins date back to the late years of British colonisation and whose current form was launched in 1965. An in-kind subsidy scheme, the PDS distributes primary necessity goods (primarily rice, wheat, sugar, and kerosene) to below-poverty-line households across the nation. The *ration shop*, or fair-price shop, constitutes the so-called "last mile" of the programme. It is the space where people receive their monthly quota of goods, established following the National Food Security Act (NFSA) of 2013. With its long duration as a targeted programme, the PDS has been widely recognised as a core source of livelihood for people in poverty, and one that plays a substantial part in guaranteeing the right to food across the nation.¹

The PDS divides decision-making tasks between India's central government and the 29 states in the nation, as well as its seven special territories. Structural decisions on programme design are taken at the central government level and can result in legal provisions such as the NFSA, which increased PDS coverage to about two-thirds of the population and redesigned access categories for households. State governments are in charge of diverse administrative decisions, including the ration shop opening days, the financial concessions to

1. Right to Food India. National Food Security Act 2013: A Primer (2016), <https://drive.google.com/file/d/1NAAYjKQZ0axSddWdoVMhzllhKunwOs9a/view>, access: August 14, 2024, 11:53am; Jean Drèze, Nazar Khalid, Reetika Khera, and Anmol Somanchi, Aadhaar and food security in Jharkhand. *Economic & Political Weekly* 52[50] (2017), pp. 51–59.

ration dealers, and importantly, the set of commodities to be offered within each state as part of localised rations beyond staple goods.² But the core of decision making authority remains at the central government level, where determinations on the whole programme – catering to over 800 million people as of July 2023 – are made and disseminated for local implementation. The ration shop is the space where the person receives their goods, but rather than a site of decisional power, it is a space of encounter between PDS users and the provider who caters to them.

As a researcher of Information Systems (IS), my fourteen-year focus has been on digitisation. In the context of the PDS, digitisation refers to the conversion of paper-based processes into computational ones. Allocation of goods to districts, monitoring of ration shop inspections, applications for obtaining a ration card (the document that gives access to the PDS), and, especially, user identification in ration shops were all, in varied measures, digitised over the last years. Structural decisions on digitisation are also taken centrally. End-to-end PDS computerisation was first approved as a plan scheme under the 2012 Five Year plan, and then continued by the following governments.³ Over the last years, PDS computerisation has become more strictly intertwined with the national digital identity project. Launched in 2009 as Unique Identification Number (UID), the country's digital ID scheme is known as *Aadhaar*, meaning “foundation” in several Indian languages. A large digital ID database, Aadhaar is fed by the free registration of demographic and biometric

2. Madhura Swaminathan, Excluding the Needy: The public provisioning of food in India. *Social Scientist* 30[3] (2002), pp. 34-58.

3. Hartej Singh Hundal, Janani, A. P., and Chaudhuri, Bidisha. A conundrum of efficiency and inclusion: Aadhaar and fair-price shops. *Economic & Political Weekly* (2020), pp. 1-8.

(ten fingerprints and iris scan) details by Indian residents, designed to enable biometric authentication for key services including, among others, the collection of PDS goods.

But if structural decisions are taken at the central level, why then dedicate so much attention and time to long, localised visits to ration shops?

The gap between the locus of decision-making on the PDS and the loci where my research takes place has been highlighted by readers, editors and – on several occasions – reviewers asking about the reason behind my fieldwork choices. On one occasion, a reviewer referred to my research as “misplaced” because my work does not take place within the central government sites where food policy decisions are shaped. My work with the ration shops, where I have spent long hours witnessing the interaction between people, machines, and providers, is not designed to understand the key drivers of a programme that serves so many people. And so, the reviewer argued, what is the whole point? Surely research on the encounter between user and ration dealer – what, in this short piece, I call the interface – misses the big picture. A big picture, they continued to argue, that unfolds at the central government, very far from the South Indian states, Kerala and Karnataka, where my research was conducted.

In this article I dispute the reviewer’s perspective. To problematise a view of research that centres on where power (in this case, decisional power on food policy) operates, I explore the notion of the interface as a site of encounter where knowledge is generated from how people “see” the state, through viewings that the same encounter produces.⁴

4. Stuart Corbridge, Glyn Williams, Manoj Srivastava, and René Véron, *Seeing the State: Governance and Governmentality in India* (Cambridge 2005).

Differently from research on the drivers of policymaking, I see the interface as the space where people's lived experience of the state is shaped: more specifically, the experience that people have of essential service provision and, crucially, of the technology mediating it.⁵

Through field vignettes from my work across the Indian states of Kerala and Karnataka, I will argue for a vision of the interface that generates data on how people "see" the state, contributing to a body of knowledge on people's technology-mediated access to essential services. Complementing the policy knowledge that the reviewer (and a substantial body of thinking) argues for, I present the human-machine interface as a space where experience is shaped, producing data on how technologies of governance⁶ contribute to constructing people's vision of the state.

This paper is structured as follows. In Section 1 I introduce my vision of the interface in the context of field research, an interface whose impregnation with technologies assigns a substantial epistemic role to machine mediation. In Section 2 I argue for a view of research where the interface, and indeed the human-machine encounters that constitute it, acts as a space of knowledge generation on people's lived experience of essential services. This vision is corroborated by three field vignettes that, featured in Section 3, illuminate the richness of knowledge produced at the interface, specifically on the role of digital

5. Stuart Corbridge, Glyn Williams, Manoj Srivastava, and René Véron, Making Social Science Matter I: How the Local State Works in Rural Bihar, Jharkhand and West Bengal. *Economic and Political Weekly* 38[24] (2003), pp. 2377-2389; Stuart Corbridge, Glyn Williams, Manoj Srivastava, and René Véron. Making Social Science Matter II: How the Rural Poor See the State in Bihar, Jharkhand and West Bengal. *Economic and Political Weekly* 38[25] (2003), pp. 2561-2569; Véron, René, Glyn Williams, Stuart Corbridge, and Manoj Srivastava, The Everyday State and Political Society in Eastern India: Structuring Access to the Employment Assurance Scheme. *Journal of Development Studies* 39[5] (2003), pp. 1-28; Glyn Williams, René Véron, Stuart Corbridge, and Manoj Srivastava, Participation and Power: Poor People's Engagement with India's Employment Assurance Scheme. *Development and Change* 34[1] (2003), pp. 163-192.

6. Nikolas Rose, *Powers of Freedom: Reframing Political Thought* (Cambridge 1999).

technology in mediating a large food security system. I conclude with a discussion of knowledge production at the interface in relation to other approaches to social research, illuminating its distinct value as well as its limitations.

1. Conceptualising the Interface

At the doorstep of [a district-level government office], we recognised one of our village respondents, a poor tribal woman. She explained that she had been waiting for four hours to see the officer and was afraid of losing her 'turn' if she left for a few minutes to have her lunch. By contrast, the peon allowed a large group of men led by netas [political leaders] to enter the office immediately. This group stormed in while we were still having our discussion with the district-level bureaucrat.⁷

My vision of the interface is fundamentally inspired by the work of Corbridge et al.,⁸ which, articulated across multiple outlets,⁹ constitutes the body of the book "Seeing the State: Governance and Governmentality in Contemporary India." Empirical work featured in their publication primarily draws on the Indian states of Bihar, Jharkhand and West Bengal. Central to Corbridge et al.'s¹⁰ theorisation is a programme, the Employment Assurance Scheme (EAS), which was aimed at generating livelihoods for poor people through short-term employment. Rural employment

7. Field note, Malda district, West Bengal, 28 Jan. 2000 (Véron, Williams, Corbridge, and Srivastava, *The Everyday State and Political Society in Eastern India*, pp. 1-28).

8. Corbridge, Williams, Srivastava, and Véron, *Seeing the state: Governance and governmentality in India*.

9. Cf. Corbridge, Williams, Srivastava, and Véron, *Making Social Science Matter*; Corbridge, Williams, Srivastava, and Véron, *Making Social Science Matter II*; Véron, Williams, Corbridge, and Srivastava, *The Everyday State and Political Society in Eastern India*; Williams, Véron, Corbridge, and Srivastava, *Participation and Power*.

10. Corbridge, Williams, Srivastava, and Véron, *Seeing the State: Governance and Governmentality in India*.

guarantees are managed, since 2005, from the Mahatma Gandhi Rural Employment Guarantee Act (MGNREGA), a programme that guarantees 100 days of work at a minimum wage to rural households that request it.¹¹ Even in their early writings, Corbridge et al.¹² display an approach to the EAS centred on studying people's interactions with the state, mediated by the clerks and officers people engaged with when accessing the scheme.

It is Corbridge et al.'s¹³ study of India's anti-poverty architecture that lies at the basis of my perspective on the interface. Engaging the argument of "Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed", the perspective of Scott's¹⁴ study of governmental schemes addresses the legibility of populations for the state. In turn, Corbridge et al.¹⁵ ask how *populations* see the state: their work on the EAS shows that these sightings emerge from *encounters*, i.e. moments in which people "meet" the state in its physical manifestations. As such, the state is no abstraction. Rather, it is the policeman patrolling the streets, the clerk accepting or refusing a request to join the EAS, the institutional embodiments encountered by people in their everyday experience. Such encounters, where the person physically "meets" an entity representing the state or a higher power, are central to my image of the interface. Here I conceive the interface as a *locus of encounter* that shapes people's way of seeing an

11. Diego Maiorano, The politics of the Mahatma Gandhi National Rural Employment Guarantee Act in Andhra Pradesh. *World Development* 58 (2014), pp. 95-105; Rajesh Veeraraghavan, *Patching Development: Information Politics and Social Change in India* (London 2021).

12. Corbridge, Williams, Srivastava, and Véron, *Seeing the State: Governance and Governmentality in India*.

13. Ibid.

14. James C. Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed* (New Haven 1998).

15. Corbridge, Williams, Srivastava, and Véron, Making Social Science Matter; Corbridge, Williams, Srivastava, and Véron. Making Social Science Matter II.

empirical object or setting, such as “the state” as represented by its bureaucrats, clerks and physical offices.¹⁶

It is in these encounters, often frustrating and sometimes violent for vulnerable people (such as the woman in the opening quote), that knowledge of core aspects of social and public life is produced. This represents a rupture with the Weberian vision, based on a “faceless” bureaucracy that makes the state impartial and impersonal. The worldview embraced by Corbridge et al.¹⁷ is predicated on Benei and Fuller’s “anthropology of the everyday state”,¹⁸ a vision that illuminates the quotidian practice of politics and the way it interjects with people’s lived existence. Significantly for my work, the Weberian view of a faceless bureaucracy echoes the critique to my approach: if relevant decisions are made in spaces detached from the citizens, such as the sites of power that make decisions on the PDS (and other centrally administered programmes), it is these spaces that should be investigated, not the physical interface where poor people encounter the state. It is true at the same time that the woman from the opening quote, a below-poverty-line village resident, would lose any voice in such a research approach, and with her the many people placed in a structural relation of subordination towards the state and its programme providers.¹⁹

Over the years, an “anthropology of the everyday state” has been applied especially with a view of voicing the concerns of research

16. Silvia Masiero, Redesigning the Indian Food Security System Through E-Governance: The Case of Kerala. *World Development* 67 (2015), pp. 126-137; Silvia Masiero, Biometric Infrastructures and the Indian Public Distribution System. *South Asia Multidisciplinary Academic Journal* 23 (2020), pp. 1-22.

17. Corbridge, Williams, Srivastava, and Véron, *Seeing the State: Governance and Governmentality in India*.

18. Véronique Benei and Cristopher Fuller, Introduction, in: *The Everyday State and Society in Modern India*, ed. Véronique Benei and Christopher Fuller (London 2001).

19. Chatterjee, Partha, *The Politics of the Governed: Reflections on Popular Politics in Most of the World* (New York 2004).

participants, seeking to restore epistemic justice.²⁰ In the approach relied upon here, a central role is played by the participatory anti-poverty programmes of India's central government that have marked, as Corbridge et al. say, "a sea-change in the way in which the Indian government approaches its citizens."²¹ Devised from the early years of the 2000s, such programmes involve institutionalised forms of participation, where users are directly consulted on schemes, their outcomes, and their potential improvements. These schemes, of which the EAS was an example, have mirrored the wave of reforms known as Panchayati Raj,²² which sought to discontinue a top-down, paternalistic way of combating poverty.²³ Programmes like the EAS invited a theoretical approach to see how people's sightings of the state emerge through encounters with it. This view has been the core of my study of the PDS and has informed the vision of the interface as *locus of encounter* that permeates this paper.²⁴

2. Human-Machine Interfaces

The vision of an "anthropology of the everyday state", explored here, offers detail on how loci of state-citizen encounter, such as anti-poverty programmes like the EAS, can shed light on people's lived

20. Escobar, Arturo, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds* (New York 2018).

21. Corbridge, Williams, Srivastava, and Véron, *Seeing the State: Governance and Governmentality in India*, p. 2.

22. Jyotirindra Dasgupta, India's Federal Design and Multicultural National Construction, in: *The Success of India's Democracy*, ed. Atul Kohli (Cambridge: Cambridge University Press 2001), pp. 49–77; Mitra, Subrata K., Making Local Government Work: Local Elites, Panchayati Raj and Governance in India, in: *The Success of India's Democracy*, ed. Atul Kohli (Cambridge 2001), pp. 103–126.

23. Stuart Corbridge, "The Militarization of All Hindudom"? The Bharatiya Janata Party, the Bomb, and the Political Spaces of Hindu Nationalism. *Economy and Society* 28[2] (1999), pp. 222–255; Stuart Corbridge, and John Harriss, *Reinventing India: Liberalization, Hindu Nationalism and Popular Democracy* (London 2000).

24. Cf. Masiero, Biometric Infrastructures and the Indian Public Distribution System.

experiences of access to the state. Such loci can be frustrating, as in the experience of the woman left waiting for indefinite times outside a government office, or indeed violent, when the extremisation of such experiences results in capture, deportation, and even death. Recent studies of the introduction of Aadhaar's biometric verification in India's public distribution system illuminate issues of exclusion of entitled beneficiaries,²⁵ and also, most extremely, hunger deaths in the state of Jharkhand, associated to the inability of people to connect their ration card to the Aadhaar database, resulting into denial of their access to essential food.²⁶

At the same time, Corbridge et al.'s²⁷ work precedes the historical phase in which technology, first in the form of essential computerisation and then in that of increasingly advanced digital tools, started being adopted in anti-poverty programmes, recently culminating in programmed welfare.²⁸ A passing reference is made in Corbridge et al. (2005) to the advent of digitisation:

In those parts of rural India where even poorer families now have access to TV sets, perhaps powered by a car battery where there is no electricity supply, the possibility also exists for what Rajagopal has called [...] a collective libidinal experience. This mode of experiencing the state reaches back to conversations that people may have on the basis of shared readings of a newspaper. Whether it also anticipates those sightings of the state that might be

25. Drèze, Khalid, Khera, Somanchi, Aadhaar and food security in Jharkhand; Karthik Muralidharan, Paul Niehaus, and Sandip Sukhtankar, *Balancing Corruption and Exclusion: Incorporating Aadhaar into PDS. Ideas for India*, 17 (2020).

26. Shiv Sahay Singh, *Death by Digital Exclusion? On Faulty Public Distribution System in Jharkhand. The Hindu* (2019); <https://www.thehindu.com/news/national/other-states/death-by-digital-exclusion/article28414768.ece>, access: August 24, 2024 1:50pm.

27. Corbridge, Williams, Srivastava, and Véron, *Seeing the State: Governance and Governmentality in India*.

28. Chaudhuri, Bidisha, *Programmed Welfare: An Ethnographic Account of Algorithmic Practices in the Public Distribution System in India. New Media & Society* 24[4] (2022), pp. 887-902.

provided by Internet access – along the lines perhaps of panchayat-level computer booths that have been promised in Andhra Pradesh and Madhya Pradesh – is a moot point [...]. [I]t is likely that the Internet will change poorer people's experiences of and reactions to the state, just as other new technologies have done previously.²⁹

Fast forward to 2024, and the quote above seems prophetic.

Nationwide infrastructures like Aadhaar are among a plethora of digital systems that regulate, among other things, people's access to services as essential as food, shelter, and social protection. Not only have technologies affected people's reactions to the state, but they have become deeply, and indivisibly, entrenched in the very same routes through which people have access to the state itself. Aadhaar-mediated access to the PDS, illustrated in the field vignettes below, is a poignant example. In the states of Kerala and Karnataka, where my fieldwork took place, the experience of going to the ration shop is now an inherently technology-mediated encounter. When the person visits the ration shop, the ration dealer checks their ration card, then inputs the card number in a state-provided laptop. They then prompt the user to enter their fingerprint in a biometric machine reader, to retrieve their identity and entitlement. All parts of this experience, up unto the disbursement of the ration, are technologically mediated, and in the new Aadhaar-based architecture, ration collection is conditional to biometric recognition.

The strict intertwining of access to anti-poverty programmes and digital mediation is best captured by another concept, that of *technologies of governance*, first theorised in Rose.³⁰ It is important to note that Rose's technologies of governance have little to do with

29. Corbridge, Williams, Srivastava, and Véron, *Seeing the State: Governance and Governmentality in India*, p. 28.

30. Rose, *Powers of Freedom*.

digital mediation. The term refers to “all the institutions, practices, and classification techniques utilized to perform the actions of government”,³¹ and applied to anti-poverty programmes, it sheds light on how people are seen through the social protection schemes that influence their lives and livelihoods. The EAS, for example, qualifies as a technology of rule: Through it, people were (a) deemed entitled or not to access a programme of employment; (b) subjected to practices of verification of their identity and entitlement, and (c) on that basis, authorised or not to sign into the programme. All of this happened way before the digitisation that Aadhaar and other technologies brought and is paradigmatic of the way technologies of rule directly affect people’s access to items or services of primary need, as well as their conception of what constitutes meaningful information.³²

With the due variations, the same argument can be made for the PDS. Since its launch in the current form, the programme has had a fundamental purpose: that of providing subsidised items to people in need, first on a universal basis and then, from 1997 on, on a targeted one.³³ The programme’s architecture has persisted over time. Goods are procured at the central level by the Food Corporation of India (FCI), a central agency assessing state-level needs and procuring commodities according to them. The introduction of a targeted system in 1997 meant two primary actions: First, poverty lines for all states had to be established, with commodities being assigned accordingly to the effective need of each state. Second, ration shops

31. Rose, *Powers of Freedom*, p. 28.

32. Janaki Srinivasan, *The Political Lives of Information: Information and the Production of Development in India* (New York 2022).

33. Josephine Esther Mooij, Food Policy and Politics: The Political Economy of the Public Distribution System in India. *Journal of Peasant Studies* 25[2] (1998), pp. 77-101.

had to introduce entitlement verification through ration cards, a practice that generated, over time, the issue of bogus cards from people seeking to exploit the system while not entitled.³⁴

Over the last decade, the digitisation of the PDS through Aadhaar reified this measure. An increasing number of states uses Aadhaar's database for PDS user recognition. Rather than simply showing a card, people lining up at the shop have to biometrically document their identity and associated entitlement to the PDS. In states including Kerala and Karnataka, this is done through the use of fingerprint-readers that ascertain the individual's Aadhaar-registered identity and entitlement. The country sees different ways to achieve the same outcome. In the state of Tamil Nadu, smart cards with a code allow people to verify their identity, then receiving a text message upon disbursement of rations.³⁵ As noted by Carswell and De Neve,³⁶ such a system erases the older ration card, a physical artefact that, through stamps placed every month on the card's booklet, allowed people to keep track of the effectively collected rations. Even this decision comes under the rubric of digitisation that the state government, faced with the request to computerise, decided to embark upon.

Technology-mediated ration shops, such as those described below, constitute important examples of human-machine interfaces. These

34. Josephine Esther Mooji, Food Policy in India: The Importance of Electoral Politics in Policy Implementation. *Journal of International Development: The Journal of the Development Studies Association* 11[4] (1999), pp. 625-636; Justice Wadhwa Committee (2010). Report on the State of Kerala. New Delhi, Central Vigilance Committee on the Public Distribution System.

35. Reetika Khera, Smarter than Aadhaar: Govt's Insistence on Disruptive Option is Bewildering. *Business Standard* (2018), https://www.business-standard.com/article/opinion/how-successfully-last-mile-authentication-has-recorded-pds-118031301260_1.html, access: August 14, 2014, 2:31pm.

36. Grace Carswell and Geert De Neve, Transparency, Exclusion and Mediation: How Digital and Biometric technologies are Transforming Social Protection in Tamil Nadu, India. *Oxford Development Studies* 50[2] (2022), pp. 126-141.

spaces are populated by multiple actors: the beneficiary who lines up to collect their ration, the ration dealer that disburses it, the machine that reads the person's identity through the card and allows, or denies, disbursement of the food ration to them. These spaces are the reason I argue, in line with Veeraraghavan³⁷ and Srinivasan,³⁸ that human-machine interfaces are permeated with technology, and constitute a locus of knowledge generation with which ethnographic research needs to engage. To explore that locus, I move into vignettes that shed greater light on how the interface of humans and machines shapes people's lived experience of anti-poverty programmes.

3. Stories from the Interface: India's PDS from Recipients' Eyes

3.1 Aisha: *The Wait for a Ration Card*

"For the third time, I have not received my ration card." Aisha, a middle aged below-poverty-line woman, lives in a slum colony within one of Kerala's major cities.³⁹ In telling her story, she does not sound angry or vengeful: she is only tired, extenuated by a wait that has protracted for months and that denies her the key document to collect goods from the ration shop.⁴⁰ After having lodged an application for renewal of her households' ration card about six months ago, Aisha has been waiting to receive notification by the Taluk Supply Office (TSO), the office in charge of producing her new card, that the document was ready for collection. But in July 2010, the government of Kerala registered a backlog of over 600 thousand ration card applications, essentially preventing an equal number of

37. Veeraraghavan, *Patching Development*.

38. Srinivasan, *The Political Lives of Information*.

39. All participants have been anonymised.

40. Extended versions of participant stories are narrated in my book *Unfair ID* (London 2024).

households from receiving the document needed to collect goods from the ration shop.⁴¹

As I speak to her in August 2012, Aisha direly needs her ration card. In the PDS, receiving food rations is conditional to being recognised as an entitled user, and the ration card – back then, a booklet stamped by the ration seller every month at the ration shop – determines such entitlement. Ration cards in Kerala have different colours according to poverty status. In 2012 they were blue for above-poverty-line (APL) households, pink for below-poverty-line (BPL), and yellow for Antyodaya Anna Yojana (AAY), the poorest of the poor who are entitled to greater quantities of subsidised goods.⁴² For the third time Aisha has spent the day queueing by the local TSO, hoping in vain to collect a document that is likely stuck, with many others, in the burgeoning backlog for which the Kerala Rationing Officer responds.

What is behind Aisha's long wait? Her stuck application can be seen as an unintended consequence of a measure that, approved by Kerala's Ministry of Food and Civil Supplies in 2010, is designed to have positive consequences for recipients. This measure was the approval of the Ration Card Management System (RCMS). Launched in 2010, RCMS was a workflow management programme aimed at computerising the main phases of the ration card release process, meaning the application by the user, application processing by the TSO, and the delivery of the document to the user on TSO premises.

41. Silvia Masiero, *Transforming State-Citizen Relations in Food Security Schemes: The Computerized Ration Card Management System in Kerala*. Working paper, CDS Trivandrum (2012), <http://14.139.171.199:8080/xmlui/handle/123456789/56>, access: August 14, 2014, 14:39pm.

42. Following the approval of the National Food Security Act (NFSA) in 2013, the classification of PDS beneficiaries has changed: APL, BPL and AAY have been replaced by PHH (Priority Households) and NPHH (Non-Priority Households), according to which new ration cards have been designed.

Digitising the ration card flow would help process applications more smoothly and effectively, as officers at the Kerala Rationing Collector discussed with me in 2010. The whole point behind RCMS, an early measure of computerisation of a large anti-poverty programme, was to introduce rigour and efficiency in the process of ration card delivery, streamlining citizens' applications and combating the issue of bogus ration cards that had become pressing in the state.⁴³

Seen from the eyes of state officers, the introduction of RCMS was direly needed to streamline a core component of the PDS. My interviews with staff at the National Informatics Centre (NIC Kerala), which implemented the new digital process, revealed a similar perspective: before the introduction of RCMS, ration card applications had to be lodged directly with the TSO, kicking off a long, paper-based procedure whose outcomes were less than certain. All this, interviewees remarked, happened at a time when diversion of goods from ration shops was a serious issue. Ration dealer involvement in diversion of goods to the market, prompted by the tough conditions of running a ration shop,⁴⁴ added to the need for a computerised process of ration distribution.

And at the same time, the interface met by Aisha – her encounter with the clerk at the TSO – produced a very different picture from the rationalisation narrated by government and NIC officers. On the one hand is the logic of “digitisation for development” that the introduction of RCMS operates, on the other is Aisha's experience, where the promise of digitisation vanishes in the frustration of denial of an essential document. Something akin to Alexander

43. Justice Wadhwa Committee, 2010.

44. Reetika Khara, Trends in Diversion of Grain from the Public Distribution System. *Economic & Political Weekly* 46[1] (2011), pp. 106–114.

Galloway's notion of the "unworkable interface"⁴⁵ emerges through the technological transformation that conditions Aisha's experience. The implementation of RCMS entailed a transformation that resulted in a temporary backlog that became semi-permanent since the entire system was replaced with the transition to an Aadhaar-based PDS. But when questioned about it, Aisha was not aware of the existence of such an artefact called RCMS, neither of the digitisation of the ration card management process. All she could see was the outcome of the digitally-induced backlog, an outcome mediating her possibility to access a vital food scheme.

While preceding the wave of digitisation that made Kerala's PDS Aadhaar-based, Aisha's story is revealing of how the interface, in this case represented by her frustrating encounter with the provider of an essential document, is saturated with information about lived experiences of anti-poverty schemes. Particularly, it is at the interface with the TSO clerk that Aisha's knowledge is produced and it is here that, in an exchange revealing that it is impossible for her to access a key document, that her subordinate interaction with the state is lived in its reality. Knowledge produced in power sites, such as the Ministry of Food and Civil Supplies where RCMS was approved, illuminates a perspective that links digitisation to utterly positive outcomes for users of the PDS. The interface not only adds to, but disputes that finding. What it reveals is a narrative of frustration and concern, placed into the life of a member of society whose vulnerability and subordination are perpetuated by denial of a ration card.

45. Galloway, Alexander, *The Unworkable Interface*. *New Literary History* 39[4] (2008), pp. 931-955.

3.2 Deva and Ayanka: *"It Never Works with Her"*

April 2018. During a ration collection day, my co-fieldworker and I sit by a ration shop in one of the largest cities in the state of Karnataka.⁴⁶ A young woman, Deva, stands in the ration shop line with her mother Ayanka. When their turn comes, Ayanka goes through the Aadhaar-Based Biometric Authentication (ABBA) system implemented in the shop, the ration dealer checks her ration card, then puts her ration card number in the shop's laptop. He further prompts her to enter her fingerprint in the biometric machine reader connected to the laptop, to retrieve her identity and entitlement to PDS rations. Differently from earlier versions of the PDS, ABBA requires not only the ration card, but biometric authentication along with it, which, in the Karnataka implementation of the system, is performed with a fingerprint reader divided from the shop's point-of-sale machine.

But at the moment of authentication, Ayanka's fingerprint is not recognised by the biometric reader. Instead of letting her through, the system cannot proceed. Authentication, the step in which a person's credentials are verified, does not happen for her. All other requirements to access her ration are into place: her ration card is recognised as valid, and having linked her card to the Aadhaar database, her data are present in the system. And still the most crucial phase, the biometric check that should afford her access to the PDS, does not work, potentially leaving her without a ration. This is why Deva is here: with her credentials linked to the same household ration card as Ayanka, in virtue of the household-based

46. Ration collection days are decided at the state level. At the time of this research, some of the shops we visited had designated the first ten days of the month as ration collection days, a policy that could be changed in virtue of needs and circumstances affecting ration shops.

nature of the ration card,⁴⁷ her fingerprint is recognised, allowing them to receive the ration. “It never works with her,” she says, referring to Ayanka and her attempt to authenticate.

Deva and Ayanka are no isolated case. In our time in the ration shops in 2018, we encountered several cases of smaller and larger family groups lining up together to ensure ration collection. For Ayanka, Deva continues, nobody has been able to explain why her fingerprint authentication fails. At the time of introduction of ABBA, all PDS users were requested to visit the local *seva kendra* (shop offering basic e-government services and registration) so to link their ration card to their Aadhaar records. This process, called Aadhaar seeding, provides an extra layer of security that the person is who they claim to be, and crucially, that they are entitled to the PDS. Behind such an authentication policy is again the government’s intention to fight against the syphoning of rations from the PDS. After many years of what the Justice Wadhwa Committee⁴⁸ referred to as “rice mafia,” meaning the illicit diversion of PDS goods to the private market, biometric technology became the promised guarantor that the person collecting the ration is who they claim to be, and crucially, is entitled to ration collection.

Here again the story from the interface is quite different from the narrative that government bodies articulate since the implementation of an Aadhaar-based PDS in Karnataka. Aadhaar’s introduction is an advanced version of the barcodes that, applied to ration cards in Kerala, sought to combat the diffusion of bogus cards. With Aadhaar, each enrolled resident is linked to their unique biometric

47. Sriraman, Tarangini, *In Pursuit of Proof: A History of Identification Documents in India* (New Delhi 2018).

48. Justice Wadhwa Committee, 2010.

credentials, hence making it impossible to duplicate one's identity and tap the benefits connected to it. The Unique Identification Authority of India (UIDAI), the body responsible for Aadhaar's management, has detailed this point: the idea behind Aadhaar is that of streamlining the nation's social protection system, ensuring a clear connection between the person and the benefits accorded to them. It is this connection that will ensure a successful outcome in the fight to false beneficiaries, maximising the advantages that the poor can take in accessing the social protection systems designed for them.

And at the same time, the interface story of Deva and Ayanka disputes this view. The experience lived by Ayanka opposes the reason Aadhaar was built: as a means to streamline access. Ayanka's non-recognised fingerprint would result in denial of rations if Deva, a member of the same household, was not here to authenticate. Such exclusions from ABBA have different causes, which can accumulate to further block access. First of all, ABBA requires multiple fragile technologies to work at the same time – the fingerprint reader, the ration dealer's laptop, the connection of the laptop to the central server.⁴⁹ The failure of even one of these combined technologies may result in unsuccessful authentication for users. This is to be combined to the different readability of bodies, such as elders like Ayanka or workers whose fingerprints may be affected by labour. While a majority of beneficiaries is found to experience correct Aadhaar-based verification,⁵⁰ it is exactly the structurally weakest that may be at risk of failed authentication, with outcomes as tragic

49. Jean Drèze, cited in Aditi Priya and Shagun Priya, Even in Delhi, Basing PDS on Aadhaar is Denying Many the Right to Food. *The Wire* (2016), <https://thewire.in/rights/right-to-food-how-aadhaar-in-pds-is-denying-rights>, access: August 14, 2014, 3:13pm.

50. Abraham, Ronald, Elizabeth S. Bennett, Rajesh Bhusal, Shreya Dubey, Qian (Sindy) Li, Akash Pattanayak, and Neil Buddy Shah, State of Aadhaar report (2018), https://www.idinsight.org/wp-content/uploads/2021/10/StateofAadhaarReport_2017-18.pdf, access: August 14, 2024, 3:18pm.

as the hunger deaths associated to the introduction of biometrics in Jharkhand's PDS.⁵¹

In Deva and Ayanka's story, the ration shop emerges in its complex identity as an interface location. The shops act as a locus of encounter between household members and the ration dealer. That encounter is mediated by the shop's point-of-sale machine, to which the power of denying ration delivery to Ayanka – and ascribe to Deva – is delegated. The interface encounter produced by this interaction generates a stream of knowledge that problematises UIDAI's narrative of success. It shows instead a narrative of frustration, produced by the digitally induced denial of a right to which Ayanka is entitled by her status and documentation. With authentication failures becoming linked to denial of essential rights, the interface implicit in ration shop encounters produces important information on how below-poverty-line people experience the computerisation of the PDS.

3.3 Ankita: *"My Husband Did It for Me"*

We are still in a large city of Karnataka, observing ration collection in April 2018. Ankita, a middle-aged PDS user, meets us by her house near the local ration shop. The shop is open for the first ten days of the month, and in case of any variation in times – for instance, if commodity stocks on a given month are delayed – a sign is usually put up on the shop's door. On the shop's wall, a blackboard reports the monthly allocations for rice, wheat and kerosene for users' classified as AAY or BPL, allocations that vary according to household size. Ankita tells us about ration collection, which she has availed from the same shop since long before ABBA was introduced.

51. Singh, *Death by Digital Exclusion?*

But when asked about how she registered with Aadhaar, she shows only blurred and limited recollection of the action, timing and procedure involved: “my husband did that for me,” she says about the Aadhaar enrolment process.

The puzzling point of such a recollection is that, in fact, it is not possible that a third person, such as Ankita’s husband, could have performed Aadhaar enrolment for her. Performed across e-kiosks around the country, Aadhaar enrolment involves in-person registration of biometric credentials, hence requiring the individual to be present on site. Ankita does not detail such a process: she is instead keen to tell us about ration delivery, and particularly about how it happens through the biometric system that ABBA introduced. She gives a positive description of ABBA’s functioning: as the ration shop’s reader recognises her fingerprint, she experiences monthly ration collection as a smooth, largely problem-free experience. Sometimes, she says, the ration dealer does not give her change back when she hands in a banknote, but little can be done in response to that, she feels.

Ankita is extremely articulate on ration collection, which comes across as the part of the PDS that matters most directly to her. Performed in the ration shop every month, ration collection is what she needs to provide food on her household’s table. Unlike Ayanka, she has never had issues with fingerprint recognition, and she is more than satisfied with how ABBA has made the process smoother than it was. What she has limited recollection of is, on the other hand, the process through which she enrolled in Aadhaar, enabling the biometric collection of rations on which her family’s livelihood depends. UIDAI’s data protection framework is described in the Authority’s public sources, as well as data protection policies applied

to Aadhaar enrollees, but Ankita's story, at the same time, remains blurred on the very dynamics of her registration.

At least two points are relevant about Ankita's story. First, her experience of ration collection validates UIDAI's perspective. The Authority portrays Aadhaar as a way to simplify access to food rations, while at the same time combating the issues of corruption that have plagued the scheme for a very long time. Ankita's experience of the ration shop as the interface between her and the state is smooth. On a monthly basis she visits the shop, has her fingerprint recognised, and receives commodities according to her entitlement, with the only issue of not always receiving the exact change back from the dealer. Her story illustrates how digital mediation of the PDS can result in successful outcomes for its users, reaching to the point of advocating the digital reform that transformed a paper-based system into one largely conditioned by the introduction of biometric technologies.

Secondly, however, what is not told in Ankita's story is as relevant as what is told. Ankita does not remember the enrolment process that made her identity legible through Aadhaar and at the same time, this is the process that regulates her access not only to the PDS, but to the large architecture of essential services for which Aadhaar has been made an essential requirement. The ration shop interface, where vital goods are accessed, escapes that process. Ankita depicts it as a background component, sharing uncertain memories about it and not being exactly sure of what the whole process entailed. By contrast, she is extremely detailed about her interface transactions with the ration dealer. This, rather than previous enrolment phases, is the process that brings food on her household's table, and the one that she sees as central in her monthly visits to the shop.

Aisha, Deva, Ayanka, and Ankita all bring different perspectives to a food security programme that evolved from a paper-based to a digital version. Different in time, space, and position towards the PDS, all three views have a common denominator: they are grounded in an experience of the programme that is produced at the interface, here intended as the *locus of encounter* between them and the state provider that should supply them with food rations and essential goods. One story, Ankita's, tells a successful experience of ration collection: at the same time, it is oblivious of the dynamics that made that collection possible, leaving her unable to describe what happened with her data at the time of collection. The stories of Aisha, Deva and Ayanka show different views. While Aisha is frustrated about denial of a document essential to her, Ayanka sees her entitlement refused by a machine, an issue fixed only by Deva's correct authentication. In all three stories, knowledge at the interface seems the key determinant: the encounter with the TSO clerk for Aisha, and with the ration dealer for Deva, Ayanka and Ankita, is the moment that shapes their experience of the system, and the one that I impinge on in the discussion that follows.

4. Discussion

In this paper I have explored the notion of the interface as a locus of encounter between people and the localised embodiments of higher powers, here identified with the state representatives of a large Indian social protection programme. As this article has shown, interfaces are deeply impregnated with technologies.⁵² It is hence important to study them in terms of the lived experiences of people populating them, as well as the technologies participating in interface

52. Cf. Alexander Galloway, *The Interface Effect* (Cambridge 2012).

encounters. I began with the argument that research at the interface, so conceived, is misplaced: In the food security programme herein addressed, structural decisions are made at the central level, far away from the localised ration shops where my research takes place. Research at the interface, the argument goes, does not capture the decision-making dynamics that lie behind policy decisions in the same food security scheme. As such, it may be suboptimal to spend time in sites, such as ration shops, that rest away from the echelons of power, and only reflect the experience of users accessing programmes designed far away from them.

The perspective and field narratives reflected here problematise this vision. With the stories of Aisha, Deva, Ayanka and Ankita, I have sought to bring a different reality to light: that of users of a large anti-poverty programme that, faced with the digital transformation of an infrastructure that mediates their access to food, experience the state-citizen interface as a crucial moment for accessing vital goods. The cruciality of this moment remains strong over time. It is there for Aisha, who sees her ration card denied at a time when Aadhaar had not yet been introduced in the PDS. It is so for Ayanka, to whom Aadhaar denies access to her rations, and to Deva, who restores that access. And it is so for Ankita, who lives a smooth experience of accessing the PDS. Earlier stages of her registration process, such as Aadhaar enrolment, are blurred in her narration. What counts is what happens at the ration shop interface, in which she easily collects her monthly rations through her fingerprint, a process that she describes as smooth and unproblematic with the exception of some minor issues with change.

I contend that views like those of Aisha, Deva, Ayanka and Ankita are not *misplaced* research. It is through narrations at the interface

that the flesh of narratives on digital access to social protection systems is narrated. Had I followed the policy-centred approach that the reviewer mentioned in the introduction had suggested, these narratives would never have met my research. Ration shop stories like those told here, and at large in ethnographic research on the PDS and related schemes,⁵³ form the heart of what the interface means for users of anti-poverty programmes: that is the encounter, as stated in Corbridge et al.,⁵⁴ with the physical embodiments of what the state represents. For the PDS users whose stories are narrated here, “the state” is not the echelons of power: it is the ration dealer, the TSO clerk, the point-of-sale machine that recognises, or not, their fingerprint. Only through these embodiments can we really access what the state is, and the way it affects people in anti-poverty programmes.

Three main implications come from this statement. Firstly, research at the interface between the person and the state’s embodiments can be seen as a route to restoring epistemic justice, in the sense of repairing injustice perpetrated “on knowledge, through knowledge”.⁵⁵ The argument linked to this vision relies on the authenticity of experiences at the interface: reflecting people’s direct experience of the state and its embodiments, such experiences narrate the lived reality of users accessing systems that, like India’s PDS, may be associated with bold narratives by the government. The clash between Aisha’s and Ayanka’s experiences and the bold narratives associating the

53. Cf. Chaudhuri, *Distant, Opaque and Seamful*; Chaudhuri, *Programmed Welfare*; Srinivasan, *The Political Lives of Information*.

54. Corbridge, Williams, Srivastava, and Véron, *Seeing the State: Governance and Governmentality in India*.

55. Enrique Galvan-Alvarez, *Epistemic Violence and Retaliation: The Issue of Knowledges in “Mother India.”* *Atlantis. Journal of the Spanish Association of Anglo-American Studies* 32[2] (2010), pp. 11-26.

Aadhaar-based version of the PDS to an overwhelming success cast a shade of doubt in the policy-centred narrative that is advocated through the field.

Second, experiences at the interface are, by definition, subjective. Corbridge et al.⁵⁶ insist on this point: an “anthropology of the everyday state” must capture as the quote makes explicit, the everyday and the localised experience that this involves for users of state systems that interact with providers. This means that, unlike econometric research such as that by Drèze et al.⁵⁷ and Muralidharan et al.,⁵⁸ my work is unable to draw estimates of the size of populations excluded from the biometric PDS, or indeed to make recommendations for systems that may fix the pitfalls of the Aadhaar-based system. While works that do so have been published,⁵⁹ my work chooses a perspective that captures the lived reality of individuals: this means delving into the interface as a locus of access to anti-poverty programmes, exploring how such a locus shapes people’s experience of access, or denial thereof.

Thirdly, my research on digitisation of anti-poverty programmes has inspired this paper. As a result of my research focus, my attention to machine mediation of people’s access to food security programmes becomes prominent. At the same time, I quote Rose⁶⁰ in recognising technologies of governance as a key mediator of people’s experience

56. Corbridge, Williams, Srivastava, and Véron, *Seeing the State*.

57. Drèze, Khalid, Khera, Somanchi, Aadhaar and food security in Jharkhand.

58. Muralidharan, Niehaus, and Sukhtankar, Balancing Corruption and Exclusion.

59. Allu, Rakesh, Sarang Deo, and Sripad Devalkar, Alternatives to Aadhaar-Based Biometrics in the Public Distribution System. *Economic & Political Weekly* 54[12] (2019), pp. 30-37; Carswell, De Neve, Transparency, Exclusion and Mediation.

60. Rose, *Powers of Freedom*.

with social protection, and one that needs consideration when studying how people's access to anti-poverty programmes is digitally changed. The case narrated here presents a dichotomy between the provider's narrative and that of people seeking to access the PDS. It is knowledge at the interface that unveils such a narrative, and that makes it accessible to readers wishing to grasp a greater deal of what happens when the person encounters the ration-mediating technology. While finding it a strong tool to investigate digitisation of anti-poverty systems, I argue for an interface perspective in broader fields of social research, again in the attempt to restore the voicing of people that depend directly on the studied infrastructures for their lives and livelihoods.

5. Conclusion

This paper has questioned a policy-centred view of research on anti-poverty programmes, conceiving the interface as a locus of encounter between the user and the provider of essential services. Its perspective does not seek to be polemic and invites instead a debate in the social sciences on how interface locations – such as ration shops in India's PDS, and at large, spaces of state-citizen encounter – can provide essential knowledge on people's lived experience of the state and service providing entities. In the context of a journal centred on interface critiques, this paper advocates the interface as a locus of knowledge production. It is with this perspective that I approach my research sites, and I hope this piece has casted some light on the richness of experiences produced at the interface.

<END>

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