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Intermediaries as infrastructure: Interrogating the phatic labor of state-building

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Abstract

Investments in the digital welfare state are often driven by the promise of removing intermediaries between the state and citizens, yet they continue to play a key role in the last mile delivery of state services. By intermediaries, I mean people who interface between bureaucrats and citizens. Their work, often as proxies for citizens, is not only to simplify bureaucratic procedures for them, but also help insulate them from bureaucratic apathy. Based on 18-months of ethnographic fieldwork, I describe the work of intermediaries around government offices, who (in)visibly support citizens in navigating the bureaucratic procedures of enrolling into Aadhaar, India's biometrics-based national identity number. Building on Julia Elyachar's conception of "phatic labor," I position such intermediaries themselves as infrastructure and illustrate how their affective networks can be leveraged to orchestrate a form of distributive justice to ensure that being marginal does not preclude a citizen's access to welfare services.

Keywords

bureaucracy, brokerage, digital IDs, infrastructure, intermediaries, phatic labor

Introduction: Intermediaries in the loop

At 3:00 a.m. on 13 February 2017, I got a call from Satish,[1] who worked as house help at Xantho's residence where I stayed while doing fieldwork[2] on Aadhaar in Delhi. His call surprised me. We hadn't had a chat since I got back to the United States in early January after the second round of my field research. Half-awake, I decided not to pick up his call.

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Satish, however, was relentless; he called me on WhatsApp seven times. He cannot read or write. So, as I was finally waking up, I sent him a voice message that it was 3:00 a.m. on my end. Whatever he wanted to talk to me about could wait a couple of hours. In response, he said excitedly in a voice message, "*Bhaiyya, mera Aadhaar number aa gaya!* [Brother, my Aadhaar number has arrived!]" (Fieldnotes, 14 February 2017). Satish had finally received a letter from the Unique Identification Authority of India (UIDAI) with his Aadhaar number after about one and half years of struggle. About two weeks later, Satish sent me a photo of his new ATM card for a bank account that he opened using his Aadhaar number. In response, I asked him what he plans to do next. He told me, "I plan to now use my Aadhaar card as my proof of identity and address to get a driving license in Delhi. Then, I can start to figure out how to become an Uber driver" (Fieldnotes, 25 February 2017).

Aadhaar is a unique 12-digit number assigned to every enrolled Indian resident based on their biometric (ten fingerprints, two irises, and facial photograph) and demographic (name, age, gender, and residential address) data (UIDAI, 2010). Aadhaar translates in English to "foundation" or "the basis for something else." The UIDAI began Aadhaar enrollment in 2010 with the ambitious goal of enrolling the entire Indian population. With more than 1.387 billion enrollments by the end of 2023, Aadhaar is the largest biometric database in the world.[3] As standardized legal identities for every resident, purportedly including those who previously lacked identity documents, Aadhaar numbers can be used in transacting with any government or private organization in India. This article begins with the end of Satish's story in my field notes because it illustrates a moment when all the work that Satish and the intermediaries[4] who supported him in securing an Aadhaar number becomes invisible. This invisibility is crucial because it sustains the authority of Satish's Aadhaar number in establishing his identity. A significant part of this article is dedicated to narrating Satish's story to make the work of intermediaries who supported him visible. However, this field story is not the bureaucratic account of how Satish secured his Aadhaar number. In this "formal" account, Satish enrolled into Aadhaar by providing his demographic and biometric data, was issued an Aadhaar number, and started using it to claim his legal identity after one and half years. The events that unfolded in between these one and half years are not relevant to organizations that employ Satish's Aadhaar number to meet their Know Your Customer (KYC) requirements. Between the mundane work of managing the scale of Aadhaar enrollment spanning across India to the everyday struggles of marginal residents in navigating its bureaucratic requirements, the uneven practices of data collection required to create an Aadhaar identity need to be black-boxed and rendered invisible to practically establish the number's authority as a stable marker of a resident's identity. Knowing how difficult or tenuous the data collection process had been for Satish would inevitably make it harder for him to claim his identity through his Aadhaar number. The invisibility of intermediaries who supported him is essential to his success in (re)presenting himself to the state and the formal economy in India.

The debate over purpose of identification has become increasingly polarized between discursive logics of recognition (a welfare state can only provide services to citizens by knowing them), surveillance (knowing citizens inevitably becomes a way to track them), and exclusion (changes in identification processes of a welfare state is a strategy to

exclude the most vulnerable) (Singh, 2020; Weitzberg et al., 2021). This debate, however, is focused more on the potential ends/outcomes of identification rather than the practices through which identification is achieved. Securing identification involves practically following a bureaucratic process that is often neither easily accessible nor straightforward; it often requires getting by with a little help from intermediaries. *In this article, I focus on these intermediaries and explore the nature of their role in sustaining the data infrastructure that underlies the organization of India's digital welfare state.* I ask: Given the rhetorical emphasis on digital systems as tools to remove intermediaries between the state and citizens, what is the changing nature of their role in organizing the digital welfare state?

By focusing on intermediaries, I trace how the seams of Aadhaar as an identification infrastructure are held together by affective networks maintained by intermediaries between street-level bureaucrats and Indian residents. The imaginary of the digital welfare state is coextensive with the imaginary of seamless everyday interactions with digital technologies. Nilekani and Shah, both ex-members of Aadhaar's design team, have articulated a version of this imaginary by arguing that, as Aadhaar becomes ubiquitous, "government will disappear from people's everyday lives; instead of taking the physical form of offices and bureaucrats, government will now be evident only through the delivery of its services and their outcomes" (2015, p. 281). This imaginary is deeply consequential in the appropriation of Aadhaar as it sets up the vision for a digital future where there is no human in the loop between the Indian state and its citizens. In practice, however, there are humans abound. Digital interactions are often seamful when embedded in the messiness of everyday life (cf. Dourish & Bell, 2011; see Singh & Jackson, 2017 for seams of Aadhaar specifically). My field stories in this article describe the labor of intermediaries that often goes unnoticed in holding the seams of these digital interactions together—during Aadhaar enrollment in particular, and in practices of organizing the digital welfare state in general. Their labor sustains the imaginary of seamlessness, which is crucial for the Indian government's continued investments in digitalization of bureaucratic processes.

I begin the next section of this article by positioning Aadhaar as an infrastructural intervention in delivering government services in India. Aadhaar has quite literally become the foundation for organizing India's digital welfare state. I explore how this shift towards biometrics-based (re)organization of government services intersects with the role of intermediaries around bureaucratic offices. In the third section, I further ground this work of intermediaries by engaging with Julia Elyachar's (2010) conception of "phatic labor." My intention here is not to evaluate the ethical dimension of this work, rather it is to engage with the communicative channels of sociality that intermediaries develop within their affective networks as objects of inquiry. In pursuing this inquiry, I offer two field stories: (1) I recount my attempt to enroll into Aadhaar without the help of intermediaries only to realize that they are always around and were essential to the enrollment process, and (2) I narrate the one and half years of struggle that Satish went through in securing an Aadhaar number and how I became an intermediary acting on his behalf. I conclude this article with reflections on how intermediaries are crucial to how citizens see the state. Their work is so deeply entwined with statecraft that, in engaging with it, this article describes the phatic labor of state-building.

Aadhaar: A foundational intervention in organizing India's digital welfare state

Scholarship on the nature of the state has increasingly moved away from treating it "as an *a priori* conceptual or empirical object […]—a distinct, fixed and unitary entity that defines the terrain in which other institutions function" (Sharma & Gupta, 2006, p. 8; see also, Abrams, 1988). Within anthropology, this analytical shift has prompted increased focus on the cultural constitution and everyday lived experience of the state (Aretxaga, 2003). Attending to intermediaries has been a crucial aspect of such analysis because of their changing role in cultural struggles over two interrelated aspects of state-building: first, in the sphere of representation (how do citizens see the state?); and, second, in the domain of everyday practices that sustain state infrastructures (how is the state enacted?). Intermediaries not only shape how the state is represented but also how citizens access state infrastructures through its various bureaucracies (Corbridge et al., 2005). In mediating mundane interactions between bureaucrats and citizens, the expertise of intermediaries animates the everyday workings of the state, yet their labor is paradoxically considered ethically fraught[5] (Björkman, 2021). It is within this ethically fraught, yet indispensable nature of their labor that corruption "functions as a diagnostic of the state" in the sphere of representation (Gupta, 1995, p. 389). My primary focus in this article, however, is on everyday practices, where the work of intermediaries supports the processes of building and maintaining state infrastructures.

Scholars across the social sciences have focused extensively on diverse forms of state infrastructure—census and statistics (Ruppert, 2008), documents (Hull, 2012), street-level bureaucrats (Lipsky, 1980), water meters (von Schnitzler, 2017), electricity meters (Akrich, 1992), housing (Holston, 2007), etc.—to call attention to the distinct and asymmetrical forms of citizenship they engender. This scholarship broadly makes two core arguments: (1) in laying the foundational groundwork for organizing the state, infrastructures also mediate state–citizen relations; (2) a citizen without access to state infrastructure (water or housing or legal standing) becomes altogether less of a citizen (see also Singh & Jackson, 2021). Nowhere is this asymmetry more fraught and profound than in the procedures of identification that make up the basic classificatory infrastructure of ascribing citizenship (Breckenridge, 2014; Breckenridge & Szreter, 2012; Sperfeldt, 2022). Over the last decade, biometrics-based identification has emerged as the new terrain for debates over this asymmetry and its relationship with development and citizen empowerment (Gelb & Clark, 2013; World Bank Group, 2016b).

Despite featuring often in this debate (World Bank Group, 2016a; World Bank, 2019), Aadhaar is not specifically designed to ameliorate poverty,[6] rather it is designed to universalize unique identification in India. The standardization of identity through Aadhaar involves three key processes: (1) *Enrollment*: producing a unique Aadhaar number after collecting and de-duplicating a resident's biometric and demographic data; (2) *Seeding*: adding Aadhaar numbers to a resident's data records in other government and private databases; (3) *Authentication*: verifying that an Aadhaar number belongs to a resident when they access and claim a service. When connected with the last mile delivery[7] of government welfare services such as the Public Distribution System (PDS) of subsidized food grains, Aadhaar turns into an instrument for providing services to or targeting the Indian poor.

A resident becomes a citizen when they use Aadhaar to secure government services, and a customer when they use it to interact with private agencies. The Supreme Court of India, in its final ruling on the public interest litigations against Aadhaar in 2018, allowed its use for delivery of government services with adequate provisions to accommodate failures in accessing it and limited the access of private agencies to Aadhaar numbers (*Justice K.S. Puttaswamy (Retd.)* …, 2018). Following this ruling, the Indian government can mandate the use of Aadhaar in accessing its services, while private companies cannot. However, a resident may choose to use their Aadhaar identity to meet the KYC requirements of any organization in India. Once a resident is enrolled, their Aadhaar number circulates across other key Indian bureaucracies, becoming indeed a foundation and prerequisite for claiming citizenship. Aadhaar-based mediation of state–citizen relationships, thus, is a crucial empirical site for mapping the politics of emerging breakdowns in digital welfare services in India. Such breakdowns often involve situations where Aadhaar-based systems are imagined as mitigating the role of intermediaries, yet they continue to fill in the gaps that inevitably emerge in maintaining citizens' access to welfare services through biometrics (Baxi, 2019; Chaudhuri, 2019).

Conceptualizing phatic labor as a constitutive element of state-building

While much research in examining the ethically fraught role of intermediaries in state bureaucracies has focused on corruption (Bayar, 2005; Fredriksson, 2014; Gupta, 1995; Oldenburg, 1987), my explorations build on ongoing inquiries into the nature of the work that intermediaries do, the ends they achieve, and the skills, resources, and expertise required to do it (Björkman, 2021; Holwitt, 2020). A suitable starting point for such exploration is to focus on how such intermediaries often act as initial arbiters of the adequacy of available documentation required to successfully complete any form of paperwork in bureaucratic contexts (Hull, 2012). Intermediaries in a bureaucracy mediate the relationship between bureaucrats and citizens; they devise new sociotechnical practices to translate bureaucratic procedures into work that needs to be performed by citizens. They contextualize the state in the lifeworlds of citizens; they undergird the social infrastructure of distributing information on bureaucratic procedures (Visvanathan, 2011b; Visvanathan & Sethi, 1998). While some aspects of this work remain the same, others change with emerging needs for understanding how digital systems are made to works in digitalizing state bureaucracies.

The change in the role of intermediaries, especially with regard to making digital systems work, can be analyzed through the lens of "articulation work," as Gerson and Star argue:

> Every real-world system is an open system: It is impossible, both in practice and in theory, to anticipate and provide for every contingency which might arise in carrying out a series of tasks. No formal description of a system (or plan for its work) can thus be complete. Moreover, there is no way of guaranteeing that some contingency arising in the world will not be inconsistent with a formal description or plan for the system. […] *Every real-world system thus requires articulation* to deal with the unanticipated contingencies that arise. Articulation resolves these

> inconsistencies by packaging a compromise that "gets the job done," that is *closes the system locally and temporarily* so that work can go on. (1986, p. 266, emphasis in original)

Bureaucratic procedures, digital or otherwise, are exemplary instances of real-world systems that require articulation work. In my field stories, I illustrate the changes in the nature of articulation work needed to make Aadhaar enrollment accessible to citizens.

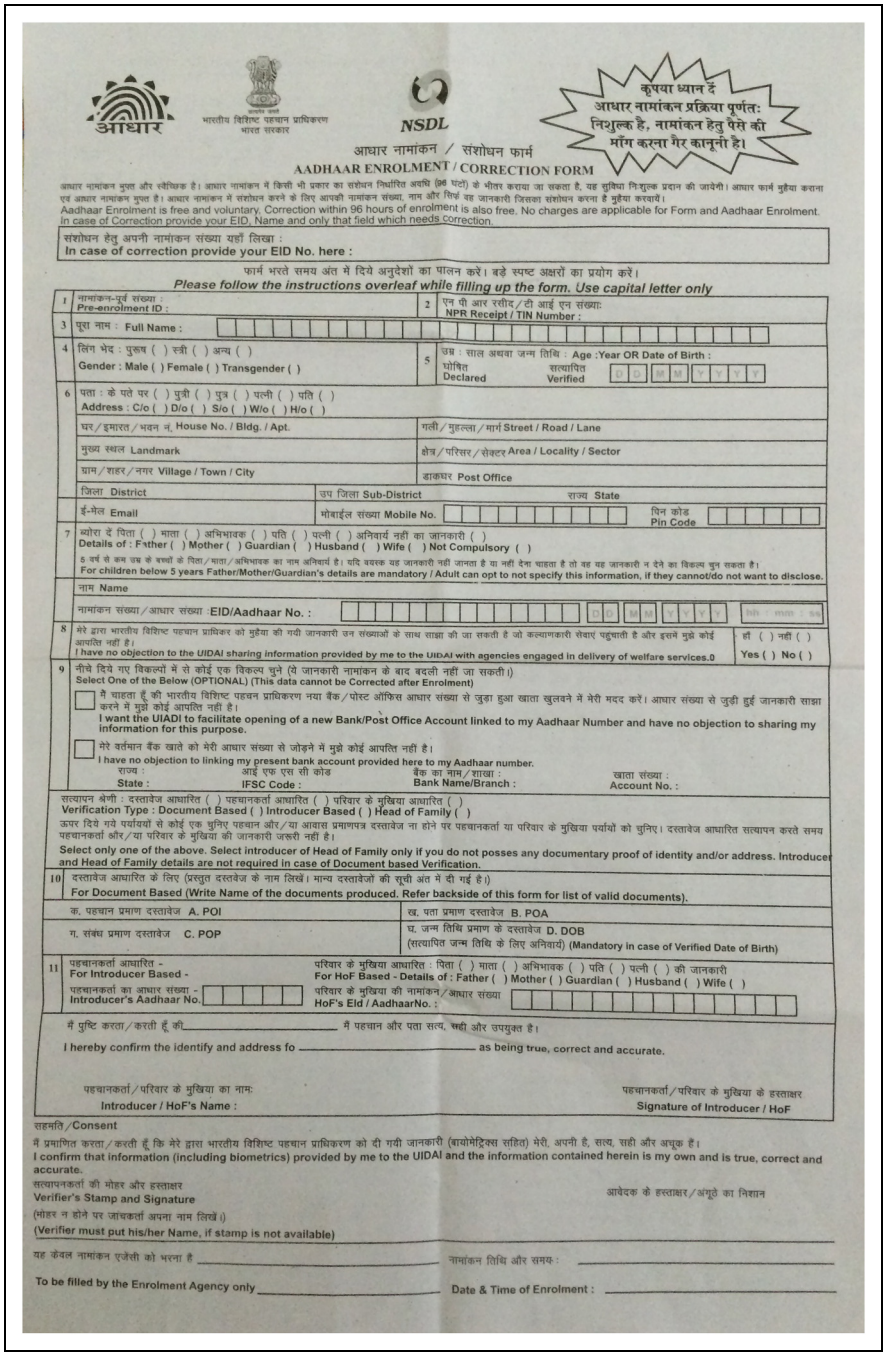
Yet, aspects of the work of intermediaries remain the same, especially the work of producing and maintaining communicative channels of sociality around bureaucratic offices. Julia Elyachar, an anthropologist of the Middle East, has conceptualized this work as "phatic labor" (2010) to analyze how Egyptian women's practices of sociality become a crucial resource for microfinance initiatives and sustenance of the informal economy. In developing this concept, she invokes a set of global cultural practices, especially in the context of doing business, to highlight the importance of building affective networks and connections to get work done such as "*wasta*" in Middle Eastern countries (Singerman, 1996), "*guanxi*" in China (Kipnis, 2012), "*blat*" in Russia (Ledeneva, 2009), "*jeitinho*" in Brazil (Duarte, 2006), and "*yongo*" in Korea (Horak & Taube, 2016). Intermediaries play a central role in maintaining these affective networks by building communicative channels of sociality in everyday conversations with its diverse members. In India, similar networks are organized around the practice of *sifarish* —"leaning on someone to get something done" (Chambers, 2020, p. 2)—and have been shown to mediate citizens' experiences of India's digital welfare state. While the term is steeped in cultural nuance, *sifarish* can broadly be understood as asking for a favor; it is a practice grounded in exchange of social capital. Such social capital is often invoked and becomes necessary to smoothe interactions between bureaucrats and citizens, especially when bureaucratic rules become difficult to follow and exceptions need to be made. It is in such situations that it becomes evident that "rather than disembedding mediation from the social and the political […] digitisation carries with it the ideological and political environments in which it is deployed" (Chambers, 2020, p. 3). Making digital systems work can at times require *sifarish*, membership in affective networks maintained by intermediaries, and connection. While much attention has been paid to their ethical ambivalence (Nadeem & Kayani, 2019), Elyachar treats the work of building and maintaining these networks itself as a distinct object of inquiry.

In analyzing this work, she builds on Malinowski's (1923) relatively overlooked conception of "phatic communion," which he coined to address "how language such as gossip and chatting can be a means of establishing ties for their own sake, rather than for the purpose of conveying any information in particular" (Elyachar, 2010, p. 453). She argues that these everyday conversations initiate and sustain communicative channels of sociality between differently positioned members of an affective network. These channels constitute the social infrastructure through which such affective networks operate and are maintained. She goes on to "bring together Malinowski with Karl Marx" (2010, p. 453) to argue that once these communicative channels of sociality are established, they enable "the flow of reputation, information, and emotion" (2010, p. 459). Although they may not be set up by people with only their economic function in mind, these channels not only support the creation of economic value but are also economically valuable in themselves. These channels are tied together by intermediaries;

in the case discussed in this article, their labor is the site for everyday practices of sociality that enable citizens to navigate the bureaucracy of the digital welfare state. Thus, in line with AbdouMaliq Simone's (2004, p. 407) provocation for urban scholarship to "extend the notion of infrastructure directly to people's activities in the city," I argue for extending the notion of state infrastructure to the activities of intermediaries in maintaining access to government services.

Considering intermediaries as infrastructure calls for a deeper analysis of their (in) visibility in state-citizen interactions. Star and Ruhleder in their seminal work of infrastructures have observed that: "the normally invisible quality of working infrastructures becomes visible when it breaks" (Star & Ruhleder, 1996, p. 113). This observation offers a point of analytic departure for studying infrastructures by looking for moments of breakdown that turn the generally-assumed-to-be-invisible infrastructure into a 'thing' that is visible to certain social groups impacted by such moments. The focus of such analysis is often on function rather than affect. Intermediaries as infrastructure become visible in moments of breakdown in state-citizen relations. Such moments necessitate an intermediary and their ethically fraught solutions to resolve breakdowns through exchange of capital (social or otherwise). For example, while Satish needed an intermediary to enroll into Aadhaar, he did not need one when he opened a bank account using his Aadhaar number. However, when analytic attention is directed towards affect rather than function—when the focus is on "an embodied experience governed by the ways infrastructures produce the ambient conditions of everyday life" (Larkin, 2013, p. 336)—the phatic labor of intermediaries becomes central to how citizens see the state. Typically, everyday conversations on intermediaries in interacting with the Indian bureaucracy begin with the question: "*Aapke paas kuch contact hain* [Do you have a contact?]" (Visvanathan, 2011a)? Looking for a contact is an exercise in proactively working with an intermediary who can navigate bureaucratic processes, anticipate breakdowns, and mitigate them. Occasions of looking for a contact offer another set of analytic moments to study intermediaries as infrastructure.

Investments in digital technologies are often premised as a response to mitigate this practice of looking for a contact. In an idealized democratic set-up, citizens should not need an intermediary to interface with their government. By positioning themselves between the state and citizens, intermediaries can inhibit direct engagement and produce conditions for friction and corruption in state–citizen interactions. Digitalization is imagined as a step towards this democratic participation; it creates channels for direct engagement between the state and citizens and thus removes intermediaries (Nilekani, 2010). However, processes of digitalization work for some citizens at the expense of others, and not for everyone. These processes themselves produce frictions and challenges, which are often overcome through affective networks of connection to find the right person to help and communicative channels of sociality to facilitate exchange of information and social capital. Digitalization, thus, has a paradoxical relationship with intermediaries as infrastructure (Chaudhuri, 2019); it is meant to remove them, yet it is practically accomplished through their phatic labor. My field stories on Aadhaar enrollment in the next two sections dive deeper into this paradox.



आधार
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आधार नामांकन प्रक्रिया पूर्णतः निशुल्क है, नामांकन हेतु पैसे की माँग करना गैर कानूनी है।

आधार नामांकन / संशोधन फार्म
AADHAAR ENROLMENT / CORRECTION FORM

आधार नामांकन मुफ्त और स्वैच्छिक है। आधार नामांकन में किसी भी प्रकार का संशोधन निर्धारित अवधि (96 घंटों) के भीतर कराया जा सकता है, यह सुविधा निःशुल्क प्रदान की जायेगी। आधार फार्म मुहैया कराना एवं आधार नामांकन मुफ्त है। आधार नामांकन में संशोधन करने के लिए आपकी नामांकन संख्या, नाम और सिर्फ वह जानकारी जिसका संशोधन करना है मुहैया करवायें।
Aadhaar Enrolment is free and voluntary. Correction within 96 hours of enrolment is also free. No charges are applicable for Form and Aadhaar Enrolment. In case of Correction provide your EID, Name and only that field which needs correction.

संशोधन हेतु अपनी नामांकन संख्या यहाँ लिखा :
In case of correction provide your EID No. here :

फार्म भरते समय अंत में दिये अनुदेशों का पालन करें। बड़े स्पष्ट अक्षरों का प्रयोग करें।
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8 मेरे द्वारा भारतीय विशिष्ट पहचान प्राधिकरण को मुहैया की गयी जानकारी उन संख्याओं के साथ साझा की जा सकती है जो कल्याणकारी सेवाएं पहुंचाती है और इसमें मुझे कोई आपत्ति नहीं है। I have no objection to the UIDAI sharing information provided by me to the UIDAI with agencies engaged in delivery of welfare services.0 हाँ ( ) नहीं ( ) Yes ( ) No ( )
9 नीचे दिये गए विकल्पों में से कोई एक विकल्प चुनें (ये जानकारी नामांकन के बाद बदली नहीं जा सकती।) Select One of the Below (OPTIONAL) (This data cannot be Corrected after Enrolment)
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☐ मेरे वर्तमान बैंक खाते को मेरी आधार संख्या से जोड़ने में मुझे कोई आपत्ति नहीं है। I have no objection to linking my present bank account provided here to my Aadhaar number.
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ऊपर दिये गये पर्यायों से कोई एक चुनिए पहचान और / या आवास प्रमाणपत्र दस्तावेज ना होने पर पहचानकर्ता या परिवार के मुखिया पर्यायों को चुनिए। दस्तावेज आधारित सत्यापन करते समय पहचानकर्ता और / या परिवार के मुखिया की जानकारी जरूरी नहीं है।
Select only one of the above. Select introducer of Head of Family only if you do not posses any documentary proof of identity and/or address. Introducer and Head of Family details are not required in case of Document based Verification.
10 दस्तावेज आधारित के लिए (प्रस्तुत दस्तवेज के नाम लिखें। मान्य दस्तावेजों की सूची अंत में दी गई है।) For Document Based (Write Name of the documents produced. Refer backside of this form for list of valid documents).
क. पहचान प्रमाण दस्तावेज A. POI
ख. पता प्रमाण दस्तावेज B. POA
ग. संबंध प्रमाण दस्तावेज C. POP
घ. जन्म तिथि प्रमाण के दस्तावेज D. DOB (सत्यापित जन्म तिथि के लिए अनिवार्य) (Mandatory in case of Verified Date of Birth)
11 पहचानकर्ता आधारित - For Introducer Based - पहचानकर्ता का आधार संख्या - Introducer's Aadhaar No.
परिवार के मुखिया आधारित : पिता ( ) माता ( ) अभिभावक ( ) पति ( ) पत्नी ( ) की जानकारी For HoF Based - Details of : Father ( ) Mother ( ) Guardian ( ) Husband ( ) Wife ( )
परिवार के मुखिया की नामांकन / आधार संख्या HoF's EId / AadhaarNo. :
मैं पुष्टि करता / करती हूँ की _____ मैं पहचान और पता सत्य, सही और उपयुक्त है।
I hereby confirm the identify and address fo _____ as being true, correct and accurate.
पहचानकर्ता / परिवार के मुखिया का नाम: Introducer / HoF's Name :
पहचानकर्ता / परिवार के मुखिया के हस्ताक्षर Signature of Introducer / HoF
सहमति / Consent
मैं प्रमाणित करता / करती हूँ कि मेरे द्वारा भारतीय विशिष्ट पहचान प्राधिकरण को दी गयी जानकारी (बायोमेट्रिक्स सहित) मेरी, अपनी है, सत्य, सही और अपूर्ण हैं। I confirm that information (including biometrics) provided by me to the UIDAI and the information contained herein is my own and is true, correct and accurate.
सत्यापनकर्ता की मोहर और हस्ताक्षर Verifier's Stamp and Signature
(मोहर न होने पर जांचकर्ता अपना नाम लिखें।) (Verifier must put his/her Name, if stamp is not available)
आवेदक के हस्ताक्षर / अंगूठे का निशान
यह केवल नामांकन एजेंसी को भरना है To be filled by the Enrolment Agency only
नामांकन तिथि और समय : Date & Time of Enrolment :

Figure 1. Aadhaar enrollment/correction form.
Source: Photo taken by the author in Lucknow, 2015.

On recognizing the need for intermediaries

As an Indian citizen studying Aadhaar while based at a US institution, my first round of fieldwork between June and December 2015 began rather slowly. In its initial stages, field research is often an exercise in waiting and meditating on research questions interspersed with short bursts of intense activity. In one of these periods of waiting, I began my process of enrolling into Aadhaar in October 2015. Taking the rhetorical claim of not needing intermediaries seriously, I did not try to find a *contact* and went directly to an enrollment center. My enrollment center was located at the outer edges of downtown Lucknow in Uttar Pradesh. It was in the office space of a financial services company. As I approached the center, a security guard stopped me and asked whether I had filled out the Aadhaar Enrollment/Correction Form (see Figure 1) and then proceeded to hand a form to me. I could only enter the center with a filled enrollment form. The process of enrollment also requires existing proof of identity and residential address. The one-page form was not difficult to understand; I was able to fill it out quickly. My turn to enroll came after a bit of waiting; the enrollment operator took a cursory look at my enrollment form and asked for my proof of identity and address. I showed him my passport as proof of identity and the photo passbook of my bank account as proof of address. He asked me to get photocopies of these documents.

I left the enrollment office to find a photocopy shop close by. I thought it would be a good idea to get a copy of my enrollment form photocopied too, so I gave the photocopier my enrollment form, passport, and bank passbook. He took photocopies of my form and the front and back side of the passport. Then, he took a photocopy of the front page of the passbook and began looking through my passbook. I was a little perplexed; why was he looking into my financial transactions? So, I asked him:

> "What are you looking for?"
>
> He replied, "I am trying to find the page where the last account transactions are recorded. Is it this one?"
>
> He showed me the final page, and I said, "Yes, but why are you looking for it?"
>
> He replied, with some amount of self-assurance, "You will need a copy of this" (Fieldnotes, 17 October 2015)!

He photocopied the transactions on the back of the page which already had a copy of the front page of my passbook and returned the documents to me.

As I went back to the enrollment center, I thought about how nobody up until then had told me that I would need a copy of the last page of my financial transactions. I did not know whether I would need it, but I had a copy of it anyway. When my turn came up again, the operator said:

> "You need a copy of the page which has records of your last transactions with the bank. Please go and get a photocopy of this last page as well."

> I looked at him with the same self-assurance as the photocopier and showed him the copy of the last transactions with the bank that he had made for me. The operator said …
>
> "Oh yes! Okay. So, now we can begin your enrollment." (Fieldnotes, 17 October 2015)

It was only later that a bank official explained to me that a copy of the last page of financial transactions is used as bureaucratic evidence for ascertaining whether the bank account is actively being used. It ensures that people are not faking their proof of address by using a defunct bank account. By extension, it has implicitly become a recommended practice to make a few financial transactions around the time that the bank's passbook is used as proof of address. While getting a copy of the last page of financial transactions made bureaucratic sense, my enrollment would have taken more time if that photocopier had not helped. His expertise in recognizing requirements for Aadhaar enrollment in relation to the documents I had illustrates how articulation work is a crucial aspect of the phatic labor of intermediaries. More importantly, however, it shows that intermediaries are all around bureaucratic offices; even if one is not looking to engage with them, they continue to mediate bureaucratic processes.

In recognition of their crucial role in mediating state–citizen relations, the Indian government has also tried to formalize aspects of their work by creating Common Service Centers (CSCs) that facilitate electronic delivery of public services, such as paying electricity bills and checking the status of bureaucratic applications online. In an interview, Anahita, a researcher working on the role of CSCs in implementing digital governance projects in India, described her experience of trying to interview one such intermediary who had set up a CSC and a copy shop inside a government building:

> In West Bengal, I went to a CSC, which was in a semi urban area. It was inside the District Magistrate's office […]. He had rented out this space. I hardly could talk to that guy. He had queues of people to do photocopies and he had two assistants. He was a very influential person in that building because he knew all the peons and everyone among the bureaucrats. Whoever sits there. He also verifies whether these are the documents you need for this purpose. Are these [documents] ok? No, you need this [document] also; make a photocopy of that. […] His center is very successful, but it has no connection to the public service delivery that you are giving [to run the CSC]. […] His location is really crucial; his personal network is very crucial, and people are coming there for completely different reasons that has nothing to do with CSC. He would run even without CSC. (Anahita, Personal Communication, 22 July 2015)

This CSC was successful because its operator had become the first line of evaluation in determining whether applicants had the necessary documents to complete their applications. The location of the CSC, the role of photocopies in making bureaucratic applications, and the need for personal connections in facilitating conversations with street-level bureaucrats are all implicated in the performance of this CSC operator's phatic labor. Much like my experience at the copy shop, access to information necessary to navigate bureaucratic procedures would become harder, if not impossible, without the phatic labor of CSC operators.

My first vignette highlights a particular form of expertise in navigating bureaucratic requirements that determines the nature of articulation work that intermediaries

perform. However, this expertise is not a necessary condition for becoming an intermediary. At times, just the act of intervening on behalf of another person and representing their interests in front of a street-level bureaucrat is enough to perform this role—although, without expertise, it becomes difficult to serve as an effective intermediary. In the second vignette, I offer Satish's story, where I ended up becoming an intermediary, instead of staying true to my initial intention of just following him as he navigated his predicament. My initial approach was broadly oriented around the injunction offered by actor-network theorists (e.g. Callon, 1987; Latour, 2005; Law, 1987) to "follow the actors" in an effort to view and navigate the lived experience of a socio-technical system from the perspective of embedded actors. In practice, however, I could not simply follow Satish. For a moment, his struggles became my struggles. Would the story that I present below be different if nobody had supported Satish through his struggles with Aadhaar enrollment? Certainly, but how different would it have been? I have often wondered about these questions to eventually realize that what is more important than speculating on these questions is exploring how the story of his struggles changed as he found support.

On becoming an intermediary

Delhi increasingly became a crucial site for fieldwork for me because of the ongoing public interest litigations (PILs) against Aadhaar at the time. The Supreme Court of India, located in Delhi, had collected all the different PILs filed against Aadhaar before it as well as the High Courts, and had started hearing them together. I wanted to follow the proceedings of the Court and started looking for interlocutors who could help. It was during this search that I reached out to Xantho, a friend from high school and a practicing Supreme Court lawyer at the time. Although he was not involved in the Aadhaar case, he invited me to stay with him at his residence. He reached out to his own network to figure out who would be the right person to talk to and how I could attend the Court proceedings. Xantho took on the task of serving as my intermediary and performing the phatic labor of finding connections to organize my access to the Aadhaar case proceedings. Fieldwork also often involves getting by with a little help from friends. It was at Xantho's residence that I met Satish, his house help.

Satish knew that I was studying Aadhaar, but our initial conversations were mostly limited to requests for cups of tea. It was a slow afternoon in November 2015, when Satish came to me to ask for help in figuring out whether his Aadhaar enrollment had been successful. He told me that he lost his phone few days before he enrolled into Aadhaar at a center close to his village in Bihar. He did not provide a mobile number during enrollment. Mobile numbers are an optional data category that is not necessary for Aadhaar enrollment but can become crucial when things go wrong. This village in Bihar, close to the border of India with Nepal, lives in a different time. Satish described problems in the village that I felt were commonplace Indian narratives of vulnerability, migration, and displacement. Aadhaar had reached this village and symbolized a new relationship with the state. I checked the status of his enrollment online by using his enrollment receipt. His enrollment was successful. However, I could

not download his e-Aadhaar letter because he did not provide his mobile number during enrollment.

Satish later obtained a new mobile number. I suggested that he should update his Aadhaar record at the nearest enrollment center and connect this number with his enrollment record. He did not need any additional documents for this process (UIDAI, 2019). Instead, he decided to wait for his Aadhaar letter.

> If there is a way I can avoid going back there, I would take it. I will have to take leave from work, and it will be a long line. The line is always long, because Aadhaar is such a thing that everyone wants it. Also, you never know how these babus[8] behave. (Satish, Personal Communication, 12 November 2015)

Engagement with street-level bureaucracy is rarely pleasant for low-income individuals who cannot read or write. Since there was still some time before the 90-day time limit for the delivery of his Aadhaar letter to expire, I did not pursue the matter further with him at the time.

About a year later, in September 2016, I met Satish again during the second round of my field research. His Aadhaar letter had still not arrived at his address in Bihar. In trying to figure out what happened with his enrollment with the help of a nearby cybercafé owner, he also lost his enrollment receipt. He now had no bureaucratic proof that he had, in fact, enrolled in Aadhaar. The cybercafé owner asked him for ₹500 (~$6) to get his Aadhaar card made without his enrollment receipt. I told him that it was a bad idea. In a separate conversation around the same time, another informant who worked with cybercafé owners making such Aadhaar cards had described their process to me: "You take someone else's Aadhaar information, you change the demographic details and photograph, and then, you can print an Aadhaar letter that will only work for you on paper" (Fieldnotes, 24 July 2016). Satish would have received a letter with somebody else's Aadhaar number with his own demographic details printed on it. He would not have been able to biometrically authenticate his demographic details through the Aadhaar database. I offered to go with him to the UIDAI's regional enrollment office in Delhi and help with the search for his Aadhaar number.

This regional office is right next to Pragati Maidan.[9] Covering over 150 acres, it is a huge complex of buildings, venue for most international events in Delhi, including the Commonwealth Games in 2010, and overlooks the historic Purana Qila.[10] The UIDAI office is below the Metro Station for Pragati Maidan. On 3 October 2016, when Satish and I got there at about 2:00 p.m., the office was filled with people. The line was long. We took a token and waited for our turn at one of the four counters where the street-level bureaucracy of UIDAI was helping people resolve problems of updating Aadhaar records, printing plastic Aadhaar cards, and enrolling people into Aadhaar. It was a one-stop shop for every Aadhaar-related problem. Satish did not take charge of his Aadhaar troubles at any moment during this visit. Maybe it was because of me, or because the line and the space and noise disoriented him a little. His body language indicated discomfort. I figured that we might have to wait for about half an hour before our token number would be called out, so I took him away from the office to a place close by where there were less people. I asked him why Aadhaar was important to him.

> He said, "I went to a bank close by once to open a bank account and they told me that my Voter ID card is not enough. I need a proof of address and they asked for my Aadhaar card."
>
> "Why do you need a bank account?" I asked.
>
> "To send money to my wife. She lives with my parents in my village. She tells me that when I send money home to my father's bank account, nothing ever reaches her. She wants to buy things for my child and herself without asking for permission from my parents."
>
> "But, if your Aadhaar number is issued from Bihar, you can't use it as a proof of address in Delhi."
>
> He did not say anything for a while and then, said, "Once I have my Aadhaar letter, I can update it to my Delhi address … right?" (Fieldnotes, 4 October 2016)

Of course, he could. That was the point of using Aadhaar, but he still did not have proof of address in Delhi. There was no employment contract between Xantho and Satish. No bureaucratically valid document that would certify that he lives in Delhi. I did not push this matter at this moment. One problem at a time!

> When our token was finally called out, I went with Satish to the counter where the official asked me how he can help us. Satish did not say anything. *It was at this moment when I became an intermediary for him.* I told the official Satish's problem and he immediately retorted, "What!? You didn't provide your mobile number?"
>
> Satish did not say anything in response. He just looked at me and then at the ground. I said, "Mobile numbers are not mandatory for enrollment."
>
> "Yes, they are not. What is your full name?" (Fieldnotes, 4 October 2016)

The official started asking him questions. I simply repeated what this official was saying, and Satish would respond to me instead of the official.

> "What's your father's name?"
>
> "How do you spell it?" (Fieldnotes, 4 October 2016)

Satish did not have an answer to this question, but he quickly gave me his Voter ID card. I passed it onto the official, but the official did not look at it. He asked me to spell it.

> I spelt out the name of his father and the official moved onto the question of age. "What is your date of birth?"
>
> I asked Satish what his date of birth was, rather than looking at the Voter ID. Satish said, "1993. Someday in March". I quickly looked at his Voter ID just to check the exact date. I realized that his date of birth in the Voter ID was 1 January 1991. I told Satish that his date of birth is different on the Voter ID. He said, "Then that must be the correct one." (Fieldnotes, 4 October 2016)

Realizing that this was uncomfortable for Satish, I decided to rely on the Voter ID information for his residential address. The search based on demographic details could not locate Satish's Aadhaar number.

> "I can't find it. You haven't provided a mobile number … right?"
>
> I said, "Yes! There is no mobile number."
>
> "Then, this is going to be difficult. Mobile numbers are something we can rely on. We do not know what the operator entered as his data and he does not have the enrollment receipt. I can't find his record this way."
>
> "Then what should we do?"
>
> "Re-enroll in Aadhaar. Start from scratch again. When we de-duplicate his biometric information, we will find the record of his previous enrollment. Then, you can come to us, and we will update his Aadhaar record".
>
> "Can we do it right now?"
>
> "Enrollment tokens are issued only in the morning. The line is long for it. You will have to come tomorrow at 6:00 a.m. and stand in line. Our office opens at 9:00."
>
> A gentleman standing next to us, said, "Don't bother! Just enroll him anywhere close to where you live. There are so many enrollment centers. Pay them some money and it will be easier and faster." (Fieldnotes, 4 October 2016)

Aadhaar authentication is designed around checking a set of fingerprints against fingerprints on record for an Aadhaar number. Fingerprints are not checked against the entire database during authentication. Satish could have used his fingerprints to authenticate himself only if he knew his Aadhaar number. The only option left for him was to re-enroll into Aadhaar and have his biometric information de-duplicated against the entire database. It was after the de-duplication process discovered a match that the enrollment operators could update the matched record with Satish's data. We decided to leave. On our way back, I went on a rant explaining to Satish why his demographic details must be consistent across his different ID documents. Otherwise, he would be rejected by government services on grounds that his ID documents do not match.

Satish did not enroll into Aadhaar again until I returned to Delhi in December of 2016. Among the field "contacts" I had established, I sought Amir's help. He was young, in his mid-twenties, and used to work as an enrollment operator in Delhi. His business model was unique: he provided Aadhaar-related services at the convenience of his clients' home. Amir came to Xantho's place with a backpack, which contained a laptop, a fingerprint reader, an iris scanner, and a small printer/scanner to enroll everybody in the house (see Figure 2). I explained Satish's situation to him. He felt confident about resolving it.

As Satish was being enrolled into Aadhaar again, Amir took his Voter ID for his proof of identity, and then he asked us: "We need a proof of address for Satish."

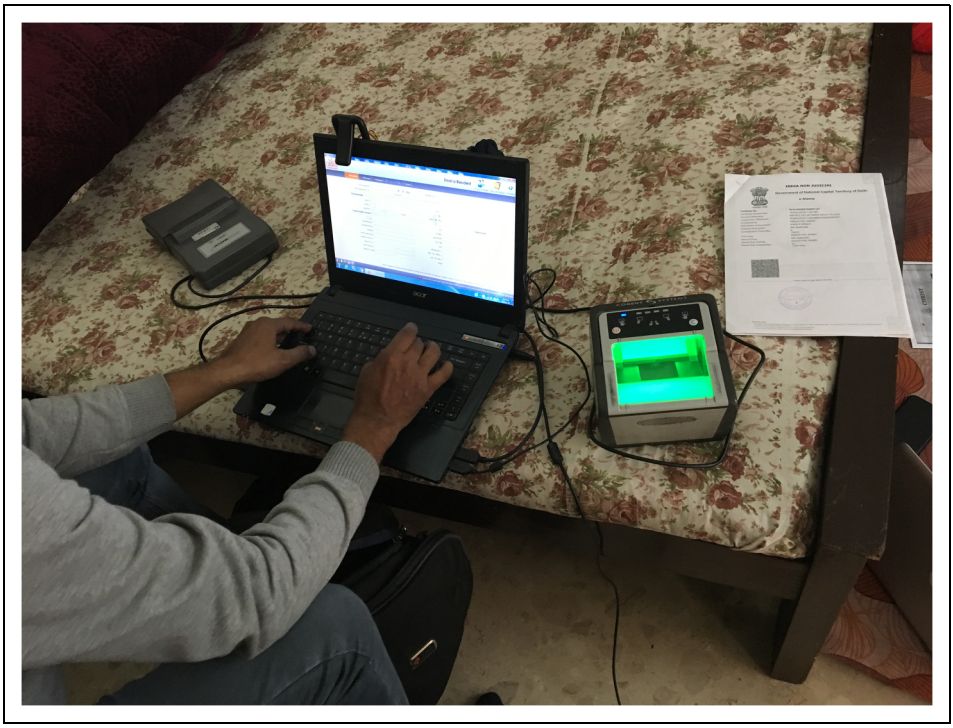

Figure 2. Amir's device set-up to deliver Aadhaar-related services to his clients' doorsteps.
Source: Photo taken by the author in Delhi, 2016.

> Xantho responded, "We don't have proof of address for him. Yesterday, I got an affidavit made on a 10 rupees legal paper, which states that Satish lives in this house. I also had Satish put his fingerprints on it. It is self-attested. I also got this document attested by another government lawyer. Would this work?"
>
> "I am in your house. I know where he [Satish] lives, but the enrollment application does not have a place for uploading this affidavit. It is not valid proof of address. We will upload it as a rental agreement. We should be fine." (Fieldnotes, 28 December 2016)

This moment illustrates the ethically fraught nature of Amir's work in certifying that Satish lives in Xantho's place. In terms of data collection, Amir's choice of the data field in uploading the affidavit can be questioned, yet it is also necessary in the process of creating a data environment around Satish. As his enrollment went on, Satish was a lot more relaxed, maybe because it was happening at home. He made Amir take his photograph a couple of times to decide which one he likes best. We ensured that Satish's demographic information matched his Voter ID. Satish also provided his mobile number during enrollment. Finally, Amir told us that he charges ₹1000/- (~$12) for every enrollment. He promised to locate Satish's previous enrollment

record and update it to match the data he was collecting that day. Furthermore, he also said that he will home-deliver plastic Aadhaar cards for everyone who had enrolled or updated their Aadhaar information that day. Xantho teased Satish that he will be deducting ₹1000/- (~$12) from his salary. Satish was furious. With a salary of about ₹8000/- (~$96) a month, this was a lot of money for him. He refused to get an Aadhaar card if it costs so much. At the end of the day, however, Xantho offered to pay Amir on Satish's behalf. I returned to the United States in January 2017 after completing the second round of field research.

Satish's story illustrates how citizens at the margins who lack existing documents to prove identity and address inevitably must do a lot more work than other residents to achieve enrollment. The enrollment process for me was relatively straightforward. Satish's challenges were compounded by a series of issues. He did not provide a mobile number during enrollment, he lost his enrollment slip, he did not have proof of address in Delhi, and his demographic details may not have matched across his different identity documents. Generally, after the first enrollment attempt, enrollees who do not receive their Aadhaar numbers by post must work to locate their Aadhaar record, if a number is generated, and then update it with new data rather than re-enrolling into the project. The trouble that Satish encountered was the absence of a starting point to locate his Aadhaar record. Re-enrollment was the only option available to him. As Satish was re-enrolled, Amir located his original record (discovered during the de-duplication phase) and then updated it with data collected during the second attempt. Satish's Aadhaar identity was stuck within the confines of the Aadhaar database and was retrieved only through an elaborate procedure of re-enrolling into the database. It only worked because Amir was willing to help Satish in exchange for money. This is not a bribe; it is a service with now a viable business model as Aadhaar is increasingly becoming the foundation of the digital welfare state in India.

Conclusion: The phatic labor of state-building

The field stories show how Aadhaar enrollment does not work by itself, it is made to work with the help of intermediaries. This help manifests through a range of activities ranging from lending expertise on bureaucratic documents (in the story of my Aadhaar enrollment) to serving as proxies for citizens at bureaucratic offices and finding the right person such as Amir to resolve enrollment troubles (as in the story of Satish's enrollment). This range highlights the deeply consequential ways in which the work of intermediaries and their position around bureaucratic offices persists and yet changes. Their work is *built on an installed base* of bureaucratic offices and does not exist independent of them. It involves developing new infrastructural competencies—knowledge and skills to achieve seamlessness in practice when interacting with data infrastructures (Sawyer et al., 2019) such as Aadhaar—to *invisibly support* digitalization of state services. Given their continued presence around bureaucratic offices, they have *reach* beyond Aadhaar enrollment into every aspect of the digital welfare state. The networks they hold together cannot simply be transferred to a new person. They are inculcated through *learning* the phatic labor of building social relations with differently positioned

actors around government offices *as a part of membership* in a community of intermediaries. Such learning ensures that they are conversant in the *conventions* of bureaucratic work. Their work mutually shapes these conventions to find solutions to bureaucratic hurdles that would otherwise be difficult to resolve. Thus, their work comes to embody the *standardized measures* to address troubles and frictions in maintaining state-citizen relations. In highlighting these features, I have mapped the work of intermediaries to the dimensions of infrastructures as outlined by Star and Ruhleder (1996). I offer this mapping as an initial resource to analyze intermediaries as infrastructures in the organization of the digital welfare state.

It is easy to pinpoint the material and discursive conditions that make or break the success of Aadhaar enrollment: the public private partnerships to organize enrollment centers at scale, the relatively easy to fill enrollment form, the standardized client software, data analytics on performance of enrollment centers, and the large number of trained enrollment operators (Singh, 2019). Just as critical, however, are the intermediaries and their phatic labor (Elyachar, 2010) that runs through enrollment like wires through a building powering it. They are fixers, middlemen, consultants, who emerge as an infrastructural response to the incompleteness of technical solutions in managing state-citizen relations. While digitalization of state services is functionally oriented towards removing intermediaries and rendering them invisible, my field stories highlight their continued ubiquity. They offer functional support to navigate breakdowns and build affective networks to get work done in everyday encounters with seamfulness of digital services. Thus, salient to the study of the paradoxical role of intermediaries is the question of how their (in)visibility is mobilized and why. This question is central to justifying investments in digital technologies in organizing state services and will continue to (re)appear in ongoing projects of state-building writ large.

Finally, digitalization cannot be achieved without the phatic labor of socializing it. This process of socializing broadens the category of those who can serve as intermediaries to include even me as Satish's proxy at the UIDAI office. The transformation of marginal residents' identities into Aadhaar numbers is made possible by creating a data environment around them sustained by such proxies. In this sense, by not taking charge of his problem at the enrollment center, Satish enrolled me into representing him. He knew that I would be able to answer questions that he would have trouble with because he could not read or write; I could employ my social standing and knowledge of enrollment process in representing him. However, there were limits to what I could achieve as Satish's proxy, we needed Amir to help resolve his enrollment troubles. The expertise and social skills of intermediaries such as Amir and the photocopy machine operator lay the foundation for their ability to serve as the unseen conduits through which bureaucratic work of digitalization gets done. However, it is equally important to note that while such intermediaries can support inclusion, they can also maintain existing social differences in access to services and thus, exclusion. In line with analyzing infrastructures, engaging with their work is also an occasion to examine the making and management of difference in everyday lives of citizens. Ultimately, just as existing solutions (such as older identity documents) often become resources to build a new one (such as Aadhaar), the existing communicative channels of sociality produced by phatic labor

of intermediaries remains salient to building new state infrastructures for digital welfare services. After all, humans need to be and are always in the loop.

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Notes

1. All respondents have been anonymized and their affiliations masked to protect their privacy.
2. I conducted fieldwork on Aadhaar in three rounds between June 2015 and March 2018. My field research spanned across multiple sites in India (Marcus, 1995) including locations such as start-up workspaces in Bengaluru; offices of the UIDAI, frontline Aadhaar-related service outlets; the Supreme Court of India; and activist organizations in Delhi. I conducted more than 100 semi-structured qualitative interviews in English and Hindi with Supreme Court lawyers, activists, Aadhaar technology designers, non-governmental organization (NGO) representatives involved in helping residents use Aadhaar; and, finally, residents navigating the different key processes of Aadhaar.
3. See, the Aadhaar Dashboard: https://www.uidai.gov.in/aadhaar_dashboard/
4. The figure of the "intermediary" is referred to in diverse ways in India ranging from "broker" and "*dalal*" to "fixer" and "middleman" (Björkman, 2021; Corbridge et al., 2005). Central to ongoing debates on the everyday state and contemporary urban life, this figure "bridges material, institutional, legal, or informational gaps and […] reveals the 'blurred boundaries' between societies and states" (Björkman, 2021, 7). In this article, I expand this figure by reflecting on them as infrastructure that supports the bureaucratic work of organizing digital state services.
5. Typically, getting work done through intermediaries involves a form of corruption of bureaucratic process (Visvanathan, 2011b). This corruption is simultaneously a consequence of the limits of rule-following and a response to rulemaking in bureaucratic processes that raise unevenly distributed challenges for citizens. In a "formal" sense, the work that intermediaries do is unethical; in an "informal" sense, their work is a necessary corrective. Combining the two perspectives, the scholarship on intermediaries often considers their work to be ethically fraught (Björkman, 2021).

6. Development projects often tend to focus on empowering the poor and promise technical solutions to the trenchant problem of poverty (Ferguson, 1997). This prerogative of targeting below-poverty families was also used when Aadhaar was conceptualized in 2006 (Ramakumar, 2010), however, the project was later expanded to cover the entire Indian population.
7. I use "last mile delivery" here to illustrate the place of Aadhaar in the logistics of organizing government services. Aadhaar authentication is employed at service delivery points interfacing with citizens to establish their uniqueness and, by extension, their legitimacy as beneficiaries. It is also at these points that intermediaries often come to play a role in citizens' experiences of securing government services. Last mile delivery is often the empirical site of investigating mediation of state–citizen relations by intermediaries as well as digital systems (Baxi, 2019; Chaudhuri, 2019).
8. Hindi for "a street-level bureaucrat" or "a government servant." While its semiotic analysis is outside the scope of this paper, the term "babu" exhibits a rich tapestry of meaning that etymologically begins with signifying respect for educated men with social capital. It became a way of addressing bureaucrats who do clerical work during colonial times and increasingly took on the negative connotations of kafkaesque experiences with Indian bureaucracy.
9. Metaphors abound, "Pragati Maidan" is Hindi for "Ground of Progress."
10. Urdu for "Old Fort."

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