DATAFIED KINSHIP: Individuating Identity in Pakistan

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Zainab is a young woman whose life is organized around her kin—her children and the affinal relations with whom she shares a house. When I met her, Zainab was trying to register for Pakistan's biometric-based, computerized national identity card. Thus far, she had been unsuccessful. The reason: her living kin relations were unable to transform themselves into the proof Pakistan's identification regime required to identify her as an individual citizen. Despite the density of her kinship network, surrounding her in the house she lives in, her kin relations failed to extend into state-authenticated identification. This was primarily because Zainab's parents, as well as her husband, are all dead. These deaths pose a problem for the mode in which the Pakistani state identifies.

Pakistan's National Database and Registration Authority (NADRA) began its operations in 2000 and now manages one of the largest centralized, biometric-based national identity databases in the world. Its reach extends into a range of everyday needs. The national computerized identity card NADRA produces for Pakistani citizens is used for banking, paying bills, property transactions, and voting, among a host of other governance functions. About 97 percent of Pakistan's population, 142 million individuals, are now registered by NADRA at identity-registration centers across the country. Individuals registered within the database are linked by their kin relations to other uniquely identified individuals.

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The question that Pakistan's identity database explicitly asks of the individuals that comprise it is not "who are you?" *or* "are you who you say you are," but "who are you related to?"

It is this last question that has made Zainab so difficult to identify within NADRA's schema. The authority's officials could not establish the truth of her relations, and by extension, could not register her into the national identity database. During one of our initial visits to the NADRA office, in a hopeful search for the official authentication of Zainab's identity, we went to see an assistant manager at Islamabad's Mega Registration Center and explained Zainab's situation. She told the assistant manager that her parents and her husband had passed away. In a case of somewhat astonishing symmetry, both her father and her husband had two wives, and it was the first wives and *their* children who had full control over the sources of documentary kinship. Zainab did not have access to either her father's or her husband's original identity documents—she only had a copy of her husband's identity card, but no way of proving that she was married to her husband since she had no marriage certificate. She had never even seen it. Further, it was her husband's first wife, and the children from that marriage, who showed up as connected to his family tree in the NADRA database. Zainab also could not definitively prove that she was her father's daughter, since she did not have a birth certificate or "b-form," a document that listed all members of a family or household unit.

During this visit, the assistant manager told us that if Zainab had *any* next of kin in the database, she too could gain access. He just could not register her independently. Given the death of her husband and parents, he asked if Zainab's natal kin, such as a sibling, might have an identity card. Zainab could potentially use a sibling's identity card to vouch for herself. Zainab said one of her three sisters might have an identity card. She remembered that when her sister and her sister's husband had visited many years ago they were discussing the identity card. I asked if she had their phone number. Her sister did not own a cell phone, but the sister's husband did. I was amazed at Zainab's ability to recall his number, after a few tries, entirely from memory. When Zainab's husband was alive, she was able to call her sister, and so had memorized it from back then. Now, she felt reluctant to call, even though there was an urgent need. Zainab mentioned that her sister's husband's overly religious nature did not sit well with her. "He has these religious sermons playing as his caller tune. Oh, that's how we will know if we got the right number!"

Sure enough, I tried the number on my cell phone (Zainab did not have one) and heard vivid details of a Day of Judgment (*qaiyamat*) scene. I handed the

phone to Zainab, and she spoke to him. It turned out that while he did have a card, Zainab's sister did not: NADRA had changed their rules, and now required all women to be photographed, something he did not agree with as it would break the rules of *pardah*—the practice of protecting modesty, most commonly through veiling but also in the form of gender segregation. Zainab and I simultaneously face-palmed. As long as Zainab's next of kin, her sister, did not have an identity card, she could not have one either. While NADRA allows for women to draw on their natal relations as the source of authentication, the lived reality of women such as Zainab—whose connection with their natal kin has been fractured through marriage and the separation it entails—does not further their ability to successfully identify themselves according to NADRA's requirements. Moreover, Zainab's everyday life is intertwined with those of her affines, but in the absence of her husband, relatives such as her mother-in-law who are registered in the identity database are unable to connect her to their family tree without a "living" link.

Such a configuration of identification practices, which both rely on and reify familial relations, produce what I term "datafied kinship." Datafied kinship is the outcome and the process by which NADRA deploys blood relations to construct uniquely identifiable individuals within its database. While this digital identification infrastructure is geared toward producing a singular individual, such an individual can only ever be constituted through their relations with others. The reach of identification technology extends beyond the individual it is purportedly identifying into the person's kin networks. In so doing, identification affects the way these relationships are recorded, configured, and enacted during the process of identity registration. Recursively, as Zainab's example illustrates, kin relations—whether they are living, antagonistic, convivial, or dead—condition the possibility of identification itself. Datafying kinship thus has profound implications for the kind of individual generated, compelling us to reconsider what constitutes a unique identity.

This article examines the mode in which Pakistan's identity database identifies. It demonstrates how its identification system constructs individuals that are fundamentally relational in their character. Advancing the concept of datafied kinship, it illustrates that the individual does not already exist as a coherent and atomized entity, ready to be captured by the identity database. Rather, through technologies of identification, the individual is brought into existence as a function of their relations with others. Drawing on twenty-two months of ethnographic research on Pakistan's identification regime—specifically fieldwork at the NADRA Registration Center in Islamabad and with individuals struggling to acquire identity cards—this article delineates the nature of the identifiable

individual produced by NADRA. It argues that NADRA's reliance on kinship and genealogical relations reconfigures our understanding of modern identification technology: individual identity is produced and tracked through relatedness, not unique bodily characteristics or biometrics alone. This view from NADRA's offices decenters the body as the singular source of identification in biometric regimes. This fact unsettles the notion that the process of identification rests on a unitary object, that is, the singular individual. Instead, it highlights the ways in which identification systems rely on bringing two or more entities *into relation* to construct an identifiable individual. As this article will demonstrate, this reliance on relationality, and particularly on kin relations, has significant implications for those navigating Pakistan's state-run identification system.

At its simplest, biometric technology deploys the body as a source of evidence for determining individual identity. Historically, biometric technology constitutes the most recent step in a long trajectory of identification through unique identifying marks, including fingerprints (Cole 2001; Sengoopta 2003), signatures, or seals (Caplan and Torpey 2001). By deploying the body as a means to not just authenticate identity but also to speak over and against persons, biometrics are considered absolute in that as long as the body is present, nothing else is needed (Abraham 2018). In *When Biometrics Fail* (2011), Shoshana Magnet borrows the notion of "corporeal fetishism" from Donna Haraway (1997, 142) to show how biometric technology approaches the body as an independent and isolatable unit. Scholars of biometric technology emphasize how biometrics are designed to access what is imagined to be biological essence through unique traces of the individual body such as fingerprints or irises. In this schema, biometric technology binds identity to the body (Gates 2011), or ties "the notion of the individual to bodily signatures" (Nair 2021, 29), such that bodily identity can then be transmitted as data across information networks. Biometric decision-making is considered the final arbiter of identity.

However, in biometrics' univocal claim to identification, other non-biometric practices and processes of identification might be obscured. What then precisely produces a unique identity? Do individuals have to be isolated from others to be identified? Or do their very ties to other persons, such as their kin, reveal who they are? While biometrics are indeed significant to the identity-registration process at NADRA, they are also "kinned." As a result, biometric technology is used for not only authenticating the individual providing the biometric information but also their kin relations. Thus, even as the study of biometrics has understandably focused on the individual's body, for NADRA, biometric information from a given individual is used toward the goal of identifying not bodies but relations.

With the introduction in India of Aadhar, a biometric identification system that issues a unique identity number to all residents, discussions in South Asia on the ethics and politics of centralized identity systems dramatically expanded. This scholarship also centers the role of the body by accounting for the way habituated postures and aged or deviant bodies resist biometric technology (Rao 2013), and by demonstrating how biometrics in particular work to "fix" identity (Rao and Nair 2019). Lawrence Cohen (2019, 2) has described the affordances of biometrics by emphasizing its capacity for de-duplicating identity—that is, to create a singular identifier that can unequivocally establish that "you are you."

I build on this literature by ethnographically examining how persons are abstracted into data, in particular at the NADRA Mega Registration Center in Islamabad, where identification practices complicate notions that biometrics are able to authenticate a unique truth of identity. While biometrics are certainly crucial for linking name to body during various stages of identification, for NADRA, as I will demonstrate, it is equally important to connect these biometrically identified persons to one another. Biometric technology is thus not the ultimate tool of identification. Instead of simply reducing people to bodies and numbers, NADRA's mode of identification sheds light on how the Pakistani state exercises power by relying on the complexity of kin relatedness.

Why does NADRA use kinship, instead of biometrics, as the primary mode for establishing individual identity? This article responds to this question in four parts. First, I will outline what constitutes identification as a process in identification systems at large, then specify why NADRA prioritizes kin relations over other types of information to authenticate individual identity. Second, I will turn to an ethnographic illustration of the registration procedure through which individuals are enrolled into Pakistan's identity database, describing how biometrics are repurposed toward relational ends. Third, the article will unpack the identity database's technological category of the "system independent." The system independent is an entity in the database who shows up as entirely unconnected to anyone else in the system. The figure of the system independent highlights how the identification regime flags and *disallows* isolated individuals—those without provable relations—from being included in the database. Fourth, to show what this means in bureaucratic practice and social life, I will return to Zainab to demonstrate how the inability to evidence kin relations results in exclusion from the identity database. Through this ethnographic inquiry into NADRA's mode of identification, I hope not only to illustrate that kin relatedness is key to the basic functioning of one of the largest identification systems in the world today but also to attend to the ways this technology comes to condition the everyday lives of those it identifies.

The central goal of this article is to delineate what is meant by identification as a process. It ethnographically uncovers how identification technology constructs a particular type of individual and situates this emergent identifiable individual in social and political life. Here, I am thinking with and through anthropological approaches to the meaning of the individual. The critique of the Western notion of a coherent, unified individual has long been important to anthropological thought, particularly with respect to exchange, objecthood, and materiality (Mauss 1954; Douglas 1986; Gell 1998; Appadurai 1986). Notably, in Marilyn Strathern's (1988, 13) conceptualization of the "dividual," such a person is "constructed as the plural and composite site of the relationships that produced them." Each dividual holds within them a social microcosm, in ways that make them a partible and permeable person. While NADRA's identification practices do not produce dividuals like the Melanesian subjects Strathern describes, the partible and composite character of NADRA's digital identities underlies the possibility of their individuation. In fact, there is no individual outside of the set of relations NADRA records. In my approach to the relationship between datafied kinship and the construction of the identifiable individual, I draw on the work of kinship studies scholars who have shown, in distinct contexts, how the individual cannot exist without the relation (Carsten 2000) and how the two are, in fact, mutually constituted (Sahlins 2013). In particular, NADRA deploys the mutuality between an individual and their set of relations as *information*; individuals can only be registered into the database as a function of their kin. For NADRA, the two are co-produced. Through an ethnographic focus on why kin relations are so crucial to Pakistan's identification system, this essay builds on conceptions of the individual and toward an anthropological understanding of identification as a process.

Understanding identification as fundamentally relational is not only significant for a precise analytical approach toward the process but also for following its impact in the everyday lives of those who encounter these technologies. Grasping the character of identification technologies elucidates the modality of power that structures the state bureaucracy that individuals like Zainab navigate. The mode of identification employed by NADRA reveals the ways in which the Pakistani state is refining its capacity to rule (Anwar 2013; Ali 2019; Qasmi 2024). It instrumentalizes that which connects people—their kin relations—for the purpose of making them identifiable. Importantly, NADRA's governance practices depart, subtly, from exercises of making individuals governable through legibility (Scott 1998; Singh and Jackson 2021). Consider, for instance, that Zainab is willing to make herself legible to the state as an individual, but that the relational mode of identification requires something more, and in fact refuses to recognize

her. The state thus wields power not just by making individuals legible but also by managing the complex interplay between illegibility and a refusal to recognize (Das 2007).

Pakistan's NADRA accomplishes this double feat by requiring relations to be made real through bureaucratic protocols of authentication, procedures of documentation, attestation, and evidencing relatedness (Navaro-Yashin 2007; Hoag 2011; Hull 2012; Engelke 2008). Yet while identification bureaucracy is understood, particularly in its Weberian mode, to flatten individuals by reducing them to numbers or documents, NADRA's relational approach tells a different story.[1] It shows how identification protocols collect data on intimate familial connections, relying on the complex and changing nature of kin ties to construct a repeatedly identifiable individual. This proves key for understanding how identification bureaucracy functions, particularly given the extended reach of identification systems in the fabric of daily life.

WHAT IS IDENTIFICATION?

The functioning of the identification bureaucracy is in large part shaped by what constitutes identification as a process. If we look at different identification systems, such as the United States' driver's license, India's Aadhar system, or NADRA's identity database, we find a shared logic at play. They all rely on being able to repetitively connect an individual to relatively stable pieces of information, ones already established as being linked to them. For instance, the Aadhar card connects biometrics to a number and a name (at its most basic), which then generates repeatable identification for the holder of that Aadhar number (Rao and Nair 2019; Singh 2021). The U.S. driver's license connects the holder of the license with their photograph, address, date of birth, sex, height, eye color, and control number to create a set of relations that then point (ideally) to one singular identity. It is the process of being able to repeatedly correlate these various qualities and objects (for example, addresses with eye color) with an individual that establishes individual identity.[2] Subsequently, being able to cross-check whether these pieces of information correspond enables the authentication of identity. In sum, these various identification mechanisms are relational in that they rely on links and connections between discrete qualities (pieces of information) to construct an individual identity—namely, to say *that* is *that* specific individual.

On the one hand, NADRA too, like these other systems, constitutes a relational system. Its explicit recording and linking of individuals as *kin* relations was what led me to closely consider the role of relatedness in crafting identification systems. This function, of creating connections between pieces of information, indicates the ways that *all* identification systems are relational. On the other

hand, the prioritization of family information by NADRA over other pieces of information (which, too, are linked) sets it apart in the domain of identification regimes. While there are ways that "the family," broadly construed, proves significant in other contexts too—such as by relatives facilitating the navigation of bureaucracy in acquiring identity cards, or given that the names of parents are written out on birth certificates, which can occasionally serve as identity documents in some countries—the extent to which NADRA systematically encodes kin relations for the purpose of using them as informational links to *define* individual identity is distinct from comparable identification regimes (Weitzberg 2020; Breckenridge 2014; Breckenridge and Szreter 2012; Sriraman 2019).

Given the way that relations undergird the system of verifying identifying information, kinship offers a way to conceptualize the design of Pakistan's identity database. The NADRA identification regime is built using a relational database (Castelle 2013; Mukherjee 2014), which allows for unique individuals to be already represented through their kin relations. Within a database that can issue search queries using the individual's unique ID number, the individual is constituted through a singular number that has the capacity to track its relations, from all directions.

Why does NADRA use and in fact prefer kin relations over other types of information for crafting individual identity in its relational database? As opposed to relying solely on data from the body—a photograph, biometrics, or information about the body such as unique marks—NADRA draws on a distinct type of socially attested and recognized biological knowledge: parentage, and by extension, broader kin relations.

In NADRA's schema, an individual's parents serve as the ideal identifiers for that person. Why? First, NADRA instrumentalizes the relation between an individual and their parent as an unchangeable fact: once X is established as the parent of Y, that fact cannot be altered. While other relationships, like those between spouses, change (such as through divorce), and others can be added through the birth of an individual's child, one's relation with a parent stays stable through an individual's life. I do not mean to suggest that the experience or perception of this parent-child relationship cannot change or be *un*recognized, such as through disowning or estrangement. Rather, for NADRA, the parental link constitutes the basic unit of identification because it offers—again, according to NADRA's logic—an unchangeable biological fact.

Second, in addition to being stable, an individual's relation to each of their parents is also a *unique* link. They may have more than one sister or brother, but not any more than one mother or father. Similarly, the parents could have more

than one child, but they themselves will only have one set of parents. In short, the linear, upward link is unique and unchangeable. In this way, the unique parental link offers an immutability distinct from the changeable qualities attached to individuals used by other systems, such as home address.

Third, the relation between an individual and their parent functions as a node in a broader network, allowing other relations to become sharply defined. Through the parents, other relational links can be established, such as between siblings. This allows NADRA to then use these other connections, not just the parent-child relation, as identifying attributes that anchor the individual within a broader network. Unlike qualities such as eye color or height, kinship offers a means to *relate* individuals into a network within the identification system.

It is important to note how siblings and other kin, such as children or spouses—basically anything an individual can have multiples of—are distinct from the unique parentage link with a mother or a father. Recording multiple siblings within the database still serves NADRA because it allows another source of differentiation between individuals. Siblings have the same set of parents, but if both siblings are recorded, then they are made distinct through negation—one is not the other. In this way, siblings serve as identifiers.

To summarize how the process of identification unfolds: an individual can be determined as X if their mother is Y *and* their father is Z *and* their brother is A *and* their sister is B *and* their spouse is C. Through the process of datafying kin, the identification regime creates a number of qualifiers, and the more qualifiers the system has to fulfill, the further it can extend its identification criteria, thereby bolstering its capacity for authenticated identification. Technically, a system can do this with any kind of information, adding more and more qualifiers. However, as explained above, a parent as an identifier is distinct from any of these other kinds of information; it offers a stability, singularity and non-fungibility rarely afforded by other pieces of information.

If identification systems rely on the *link* between pieces of information to repeatedly identify individuals, then having sources of information that are stable, unique, and even unchangeable is ideal. The significance of this fact became evident through both identity registration protocols at the front end of the registration center and the design of the database in the backend. At the center, an individual's name—through spelling or pronunciation—could often become the source of confusion or inaccuracy. Instead, data-entry operators use names (and date of birth, place of birth, address) *along* with an individual's set of relations (such as their parents, siblings, spouses, or children). Relations, established through a link between two unique ID numbers, function as more reliable

identifying attributes. While the NADRA database is designed to construct individual identity by encoding kin relations as anchors and identifiers for each individual, how this happens relies on establishing relatedness through the everyday work of identity registration.

BIOMETRIC KINSHIP AND BEYOND

The centrality of kinship to NADRA's identification regime is made apparent in the protocols of identity registration through the initial stages of producing individual identity. During my ethnographic fieldwork at NADRA's Mega Registration Center in Islamabad, a young man who had just turned eighteen arrived at the center, intending to register for his identity card for the first time. His mother accompanied him. Data-entry stations dotted the center, and when his number was called, the young man was led to one of these. The data-entry operator (DEO) at the station immediately asked for his mother's identity card. Before he took any information from the son, the DEO pulled up the mother's data through her unique identity number. He clicked through her familial relations, jumping between various family members as they showed up in relation to the mother. He then pulled up a digital form on his computer. A mirror of this form was visible to the mother and son on another screen facing them, and he began to take down basic information such as the son's name, age, and address.

When almost done, the DEO looked over to the young man's *mother* and asked her, "Aunty, you don't have henna on your fingers, do you?" She replied that she didn't. He scanned her hands to assess their fitness for biometric prints, as she was not too old but old enough that the years of household work—washing dishes, scrubbing floors, and so on—might have taken their toll on her fingers.

But why should *her* fingerprints matter? "Aren't you registering her son?" I asked the DEO. He responded that taking the mother's—the applicant's next of kin's—fingerprints allowed for a smoother process. Eventually, he asked the son to put his fingers on the biometrics reader, took his photograph, and wrapped up the data-entry process. He turned to the mother-son pair, handing over a form with the son's photograph printed on it, as well as all his personal information. He then said, "Aunty, if I can get your biometrics, your process will be finished. You just need to get this form signed by that person [the assistant director] at that window over there. If your biometrics *don't* go through, then you will have to get this attested by a Grade 18 or higher officer."[3]

The ability of a mother's body to attest for her son's identity initially took me by surprise. I began to take note of the frequency with which corporeal substitution (Haraway 1997), based on kinship, occurred at NADRA's registration

centers. In this case and many others, I was told that, for NADRA's purposes, what would work better as proof of identity than a verified link to a parent? The logic of attestation is overtly tied to authenticity, verifiability, and reliability. Biometric verification by a next of kin becomes one mode, among others, of attesting to the authenticity of an individual's identity during the registration process. I repeatedly questioned officials at NADRA, both at the registration center and in administrative departments, about how they assured verification and why the family played such an important role in this. Officials often responded that the very existence of a familial record in NADRA's database—with or without biometric verification at the time of registration—evidenced an individual's set of kin relations, which then served as a means to verify their identity.

The process of creating an individual through their relations relies on another core individuating technology at NADRA's disposal, one that simultaneously links kin to create a family record: the unique ID number that anchors every individual within the database. Early on in my fieldwork, I spoke to the original architect and ex-chairman of NADRA, who explained that while each card has a unique ID number on the front end, there were two, and at minimum one, other number(s) on the backend. One of these backend numbers connected an individual to a member of their natal family, such as siblings and parents. In addition, if an individual is married, a number links the person and their spouse, extending the individual into a distinct family tree from their natal one. Every individual's unique ID number not only connects that individual's name to their ID number, through which their identity record can be pulled up within the database. The unique ID is also linked to the unique ID of the individual's relatives, establishing a unique relation *between* the numbers of two individuals. The unique link is what makes each individual identifiable.

The kinning logic behind linking unique IDs is also historical. The ex-NADRA chairman drew my attention to how NADRA was built on a legacy system of district-based paper registries of identity cards records, launched in 1973, which also collected data on family relations.[4] After NADRA launched in 2000, it scanned these paper registers, so that NADRA officials could trace descent-based relations that reached back into a longer, paper-based genealogical record. In this way, recording and verifying family relations was central to NADRA's operations from the beginning. However, the ability to thoroughly network family members only came with time, as more citizens registered and the database advanced technologically. At present, individuals' unique identity card numbers are continually connected to one another, a process that will ultimately complete what the ex-NADRA official referred to as a "global family"—a databased network of

Pakistani kin both across the country and abroad. Through this early conversation, I learned that NADRA officials did not see the *biometric* information of individual relatives as central to Pakistan's identification system. Instead, evidencing kin relations provided the key to authenticating individual identity.

SYSTEM INDEPENDENTS

One day I was sitting with an assistant manager—a NADRA official in charge of approving applications for identity cards once they had gone through the data-entry phase—when a DEO popped his head into the entryway of the assistant manager's office, stating. "this man wants to change his address. . . . I can do it, but he is showing up as a 'system independent.'" This technological category refers to a person not linked to at least one other person within the database. Such a person is flagged as an individual without a family in the database. Being a system independent would effectively prevent that individual from maintaining their status as an identified individual within the database. In the words of the assistant manager, system independents were people "without family composition" in the database—unconnected, floating, without form. The flagging of system independents reveals how the only way to become, and stay, a uniquely identifiable individual in the NADRA database is through datafied kinship.

It is tempting to see the identification process as machinic, churning out individuals fed by data (Haggerty and Ericson 2000; Bouk 2017). Yet the gaps and lulls in the process of manufacturing the ever-incomplete individual form part of the design of the identification system. The individual does not come prefabricated. They are continually composed by registering dynamic relationships, which then allow for accurate identification through the stages of life. In this way, the identified individual is far from "just a number" in the system. Rather, for identification, and governance more broadly, to function, the system accounts for and indeed is compelled to incorporate complexity. Through the painstaking process of registration—of collecting and creating evidence of an individual's relationships, as well as the platforming of identification across different parts of life—the individual gradually appears in view. They are intermittently constructed as more and more of their relations, their identifying attributes, are attached to it, bringing its contours into sharper definition.

As described above, registration from the outset requires that the individual be situated in relation to at least one of their relations. However, system independents can still turn up, likely, I learned, as remnants from an earlier era of registration where familial connections were not as thoroughly networked as they are now—either due to less stringent registration requirements or patchy linking on the backend. As NADRA's list of required documents delineate (see

Category Type	Documents
Fresh Registration of Smart National Identity Card (SNIC)	**When any one of Parents or Blood relatives present** • Presence of applicant • Original/copy of S/CNIC-S/NICOP of any one of Parents/Blood relatives • Presence of any one of Parents/Blood relatives for Biometric Verification on CNICF **When any one of Parents or Blood relative ID Card holder but not present with applicant however, document available** • Presence of applicant • Original/copy of S/CNIC-S/NICOP of any one of Parents/Blood relatives • Any one of following Document(s): CRC OR matric/equivalent certificate OR mark sheet OR domicile/local OR passport • Attestation of CNICF **When any one of Parents or Blood relative ID Card holder but not present AND Document Not Available** • Presence of applicant • Original ID of Parent's/Blood relative's/Grandparent • Biometric Witness of any CNIC holder along with affidavit (as per format) AND interview to satisfy case officer • Attestation of CNICF satisfy case officer • Attestation of CNICF

Figure 1. List of requirements for the ID card.
Source: www.nadra.gov.pk/identity-requirements

Figure 1), the ideal circumstances for identity registration include the physical presence of a parent or a "blood relative," along with the parent or blood relative's original identity card. If the living relative cannot be brought in, their original document is accepted with governmental attestation. As I learned during my fieldwork at the registration center, NADRA primarily defines "blood relative" as a next of kin, that is, a member of the nuclear family, such as a parent, spouse, child, or sibling. Yet in the absence of all of these, identification protocols occasionally, with additional verification and approval, will accept a grandparent.

The requirements for evidencing kin relations for the identity-registration process appear obvious to, and are even internalized by, ordinary citizens. One day during my fieldwork at the registration center, a woman came up to the DEO and explained that she needed a "smart" identity card, somewhat urgently, in connection with work. Workplaces often request identity cards as a means of verifying their employee's identity. The smart NADRA card is the new generation of the older "computerized" national identity card; it has a small, readable chip and is considered more secure. The woman was accompanied by her brother. Ordinarily, when registering for an identity card for the first time, the applicant would need their parents' identity cards and, ideally, a parent or other next of kin accompanying them in person. This was not necessary in this case, as the woman was simply converting her computerized national identity card into a smart card, without making significant changes to her data.

Nevertheless, in addition to bringing her brother, she presented her aunt's identity card to the DEO, saying, "In case you need to see it, here is my *maasi*'s

[mother's sister] card." At the end of a long shift, Imran, the DEO, was more irritable than usual. "What am I supposed to do with your *maasi*'s card? If I needed a relative's card, it would be your parents' or next of kin's! Anything else, or is this it?" he snapped.

This instance exemplifies how NADRA's reliance on relatedness is not only important for NADRA but also deeply internalized by ordinary citizens who come prepared—occasionally over or incorrectly prepared, as this example shows—to evidence their kin relations. Further, this case sheds light on the precise way in which NADRA uses distinct relations. The sequential links between next of kin build the bush-like structure of a relational database. The datafied kin network spreads outward while connecting discrete uniquely identified entities. It is a chain of connections, gradually built between members of the nuclear family, which extends outward over time. This structure gives the kin network its organizational coherence.

Such a blood-based vision is reflected in a standard operating procedure built into the registration software itself. The registration application would not allow DEOs to directly change an individual's permanent address, father's name, or mother's name. While corrections to date of birth and spelling errors in name and address were the most common, and edited directly from the data-entry station, the changing of parents' names (if an incorrect spelling or name had accidentally been recorded) required further documentation and attestation by government officials of a certain rank beyond the NADRA office. Parentage, and the immediate family network that extends from it, constitutes one of the most sensitive pieces of information in an identity record.

The world of lived, not just recorded, kin relations can and often does become a part of datafying kinship in NADRA's identity database, as applicants call on family members, even extended family, to procure pieces of information such as ID card numbers or format of addresses others might have used during the data-entry process. It is important to note, however, that the protocols through which relatives can evidence an individual's identity are quite strict and narrow, often delimiting the expansive notions of kinship to which kinship studies scholars have alerted us (Clarke 2007; Leinaweaver 2008; Weston 2001; Navne and Svendsen 2022). The way NADRA determines who counts as an *evidentiary* kin relation—capable of establishing and authenticating identity for a relative—becomes particularly apparent through the category of "system independent." Following system independents' lives outside of the registration center allowed me to see how, despite an expansive world of kinship *practices*, they could still fail to be identified according to NADRA's conditions for datafying kinship.

KINNED, BUT UNIDENTIFIABLE

Zainab, who I introduced earlier, represents precisely such an individual. For NADRA, she was a potential system independent. In the absence of a living adult next of kin (who was already registered within the identification system), or any verifiable links to those who are now dead, Zainab's circumstances reveal a paradox. As described through the course of this essay, NADRA uses kin relations to create a network within which individuals can be located as discrete and unique. Yet Zainab's inability to be turned into an identifiable individual demonstrates that a thick web of kin relations does not always translate into state-authenticated identity. The relationship between identity, in this case, a person thoroughly shaped by kin relations, and identification, a state-authorized process of authenticating individual identity, breaks down.

The relational nature of identification in Pakistan—both in terms of how the system is structured and how those it identifies approach it—is also reflected in the fact that Zainab needed the identity card, in the first place, not for her personal use but for her children. Zainab had not felt the need for identifying documents before this moment. However, her children, Fatima, age seven, and Khalid, age four, needed b-forms: the document that verifies the identity of children still under eighteen so they can enroll in public elementary schools. Currently, they were in a private school that was becoming too expensive to afford. Zainab's in-laws, with whom she lived, did not consider it necessary to continue the children's education beyond middle school. Zainab feared that without her in-laws' financial assistance, her children would have to leave school. To produce these b-forms, the children had to be connected to a parent. In the absence of their father, the only option left was for Zainab to make an identity card.

During one of our many visits to the NADRA registration center, Zainab and I had decided that we would attempt to get the b-form for Zainab's children through their paternal grandmother who did have an identity card. In addition to Zainab, her children, and their grandmother, we were accompanied by Zainab's close neighbor-friend and this friend's mother. As we were waiting for our turn, the friend's mother offered that she could claim that Zainab was *her* daughter. She said, "she *is* like my daughter." We feared this would not work because, first, there would need to be some kind of proof (as discussed above). Second, Zainab worried that her nervousness about the lie would surely reveal it.

We went up to the DEO and explained our proposal for registering the children for b-forms through their grandmother. We were promptly told that this would only be possible if the grandmother was the children's legal guardian. I called a lawyer friend to see what this process looked like, and they explained

that since one of the children's parents was still alive, this was possible but complicated. In addition, Zainab and her mother-in-law looked nervous and said that the men in their family would likely not approve, because they would not understand why they, as males, would not have received the guardianship. We drove home dejected.

THE POLITICS OF UN-IDENTIFICATION

Zainab's neighbor had told her that acquiring birth certificates for her children might help their case, and even as I knew that this would likely not work for NADRA's requirements (they did not give much weight to birth certificates, as NADRA distrusted documents produced outside its own, secure ecosystem), I did not want to advise Zainab against it just in case it did work. During our last trip to NADRA, after having acquired these birth certificates, we went up to an assistant manager whom I recognized but was less familiar with. He immediately took me to the side, asking, "How do you know this woman is not Afghan? You must not be so trusting." Interestingly enough, Zainab had borrowed her neighbor-friend's burqa for precisely this reason: Zainab and her family wore pleated frock shirts considered typical of Afghan women. I explained that I knew Zainab well, and that she was younger than me, and was born in Chakwal (Punjab) until she got married. I explained that, in fact, Zainab spoke excellent Punjabi!

The assistant manager's comment to me, which expressed his suspicion toward Zainab's national identity, indicates another important role that kin relations play in NADRA's identification practices. The bureaucracy's reliance on kinship serves a key political function: NADRA is a database of citizens, so not just anyone with a parent and biometrics can be included in it. Encoding family relations allows NADRA to not only verify individual identity but also to approximate citizenship. In the absence of any other citizenship document, the presumption is simple: if your parent is a citizen, and they are the link you need to get a NADRA identity card, then you are a citizen too.

Conceptualizing individuation as foundationally relational is thus not only a matter of analytical precision but also a practical and political one. Digital identification systems like NADRA have proliferated, particularly across the Global South, where they are justified through the goal of reducing "leakages" in welfare systems (Nilekani and Shah 2016; Weitzberg et al. 2021; Ferguson 2015). Scholars and other groups have raised the alarm as governments, powered by new computational and biometric identification technologies, increase their capacity to surveil (Hosein 2013; Amoore 2006). This discussion has raised issues concerning individual privacy and the rights of citizens and refugees to safeguard their personal data (Schoemaker et al. 2021; Beduschi 2019; Lyon

2009). Concerns about the collection of biometric data, particularly in relation to surveillance, racialization, and growing inequities (Madianou 2019; Benjamin 2019), are supremely valid for protecting civil liberties in our increasingly digitized world. However, such an approach does not always account for how security states like Pakistan precisely surveil the vectors of connection and influence within the populations they govern. It is an explicitly relational mode of identification that tracks individuals *and their kin* in a post 9/11 landscape, in a context with high rates of internal and regional population flows, particularly of Afghan refugees (Alimia 2019). Given its preoccupations with securitization (Al-Bulushi, Ghosh, and Grewal 2022), as well as citizenship (Zamindar 2007; Raheja 2022; Chhotray and McConnell 2018), NADRA is concerned not only with a *bodily* individual and their personal data but also with one who fits into a broader kin network and socio-political world. Thus, while national identity databases do store and surveil through large quantities of biometric data, ultimately, as social artifacts, they record, encode, and instrumentalize social relations.

Importantly, the primary use of kinship in the database is not for the purpose of authenticating citizenship, but for that of establishing individual identity—something that an overwhelming focus on questions of citizenship can in fact obscure. The general use of kinship for identification is apparent in the fact that the requirement to evidence kin is not isolated to cases where citizenship is suspect or ambiguous. Rather, kinship serves a foundational security function: the need for others to vouch for you and to evidence your relatedness adds an additional layer of authentication within the system. While someone could potentially fake an identity document (for proof of name) and claim to be an individual named "X"—whether that is a national or non-national—and then register themselves biometrically as that, it is far more difficult to falsify an entire web of relations. Starting from the parents and building outward, each of these relations serve as discrete opportunities for verifying that the individual is truly who they say they are.

Zainab's problem was not a lack of kin relations, but that she lacked the right ones. The obstacles in Zainab's life demonstrate how identity registration can become an impossibility for some. Each potential option for Zainab ultimately became impossible—largely because of the death of an adult next of kin and the living male relatives she did have. While I met Zainab outside the registration center, which allowed me to see the complexities of this process from her perspective, it was during our time at NADRA sites that I saw how relations were recruited during attempts at registration. Between the phone calls to her brother-in-law and Zainab's neighbor's mother offering her access into another fictive kin unit, new and alternative channels were tried and tested.

While these failed, for the most part due to the gendered social world that Zainab inhabits, these failures also speak to the protocols of database structure: who it sees as viable kin, and what it sees as a reliable *record* of viable kin. Who is able to meet the requirements of these protocols? Zainab complained that her late husband, as a man, could do the running around required for bureaucratic work, which Zainab's gendered position does not allow. It is in this way that identity records, paper or digital, never concern individuals alone. They inevitably involve a complex set of relations, dead or alive. To extend this further, Zainab's exclusion from the process of biometric identification—we could not even get the data-entry process started—reveals how identification implicates much more than biometrics. Instead, it interpolates a host of complex kinship connections. Zainab's experiences expand the ethnographic view of the daily workings of Pakistan's identification system, furthering an anthropological understanding of how individuals are made and *not* made. In turn, her experience illustrates what it means to "know the governed"—the Pakistani state exercises power over those it identifies by ingesting, encoding, and working with deeply social forms of relatedness.

CONCLUSION

The last time Zainab and I went to the NADRA Mega Registration Center, Zainab had spoken to the assistant manager in Punjabi (partly to discredit any suspicion that she was Afghan), narrating how her parents had died in Chakwal. She also explained all the options we had attempted and exhausted. The assistant manager explained that one path forward was a birth certificate record, for Zainab, from Chakwal. In addition, however, she would need to bring her parents' death certificates. These documents, if they could be found, could possibly offer acceptable evidence for the parentage link. "So, we would have to go to Chakwal?" I asked in clarification. When the assistant manager responded in the affirmative, Zainab snorted and whispered to me, "Great! Let's go to Chakwal . . . then my brothers-in-law will murder us . . . and someone else can try to make *our* death certificates." Zainab was joking about the proximity of patriarchal violence that frequently centers on the mobility of women, which rendered the proposition entirely absurd.

In the absence of particular living relations or solid documentary proof of their death—although we would never know whether the death certificates would have ultimately been helpful or not—Zainab remained unidentifiable by NADRA. In her failure to be identified, Zainab's circumstances foreground the feature most fundamental to NADRA's workings: kin relatedness. Most identification systems rely on correlating pieces of information, drawn from attributes of an individual, to establish individual identity. Yet the mode in which NADRA

deploys kinship has unique affordances and implications for those who seek state identification. As this article has illustrated, NADRA's use of kin relations is undergirded by the presumption that since certain forms of relatedness are biologically unique and singular (such as parentage and the relations that extend from that), they can serve to anchor individual identities.

This mode of identification speaks to the character of individual identification practices and technologies at large: in decentering the role of biometrics in the process of identity registration, we can follow how it is not the individual body but the relations *between* individuals that serve as the source of identification. This insight proves not only essential for an analytical approach toward how identification works in practice but also for showing how the central place of kinship in NADRA's schema shapes the very possibility of identification for ordinary citizens. Failures as well as obstacles in the path of identification are often a function of the fraught and complex nature of kin relations. We can thus follow how an identification system such as NADRA does not flatten individuals into numbers or bodies, and instead relies on encoding a world of social relations. In turn, this reliance on kinship not only enables but also disallows at-hand forms of evidencing, conditioning the social and political processes of identification.

ABSTRACT

Pakistan's National Database and Registration Authority (NADRA) produces the country's national identity card and runs one of the world's largest biometric-based identity databases in the world. To be registered in the database, individuals are linked through their kin relations to other uniquely identified individuals—a practice that this article terms "datafied kinship." Datafied kinship demonstrates how individuals are not atomized bodies, ready to be captured by NADRA's identity database. Rather, individuals are digitally constructed as a function of their relations with others. This article argues that NADRA's reliance on kinship reconfigures our understanding of modern identification: individual identity is produced and tracked through relatedness, not biometrics alone. It ethnographically examines how identifiable individuals are produced through identity registration, focusing on the treatment of "system independents"—individuals unconnected to others in the database. In turn, it shows how such a relational logic of identification comes to condition the lives of those it identifies. [kinship; identification; Pakistan; digital technology; database; biometrics; datafication]

NOTES

1. See Nayanika Mathur's (2016) critique of the Weberian emphasis on rationality as the cornerstone of bureaucracy through her emphasis on the role of informal practices, irrationality, improvisation, and contextual decision-making.

2. Importantly, while some of the qualities connected to an individual by the American driver's license can change, such as addresses, others are unchangeable, such as eye color, height or date of birth.
3. Anybody employed in the Pakistani government has a rank, or "grade" in local parlance. Officials have the authority to "attest"—or vouch for—the authenticity of a given document. The problem of false attestations by government officials on identity registration forms for the earlier "manual," paper-based identity registration system led to inaccuracies in registration data. Also see Raman 2012.
4. The paper identity registry that preceded NADRA is the focus of the second half of my book manuscript. Here, I also examine how kinship formed a part of nascent identification practices in the domain of property, revenue records, and colonial identity documents that recorded individuals as the "son/daughter of" (s/o, d/o) their parent. I argue that database technology ultimately allowed kinship information to be comprehensively networked and authenticated in ways impossible before.

REFERENCES

Abraham, Itty
2018 "Prehistory of Aadhaar: Body, Law, and Technology as Postcolonial." *East Asian Science, Technology and Society* 12, no. 4: 377–92. https://doi.org/10.1215/18752160-7218326

Al-Bulushi, Samar, Sahana Ghosh, and Inderpal Grewal
2022 "Security from the South: Postcolonial and Imperial Entanglements." *Social Text* 40, no. 3: 1–15. https://doi.org/10.1215/01642472-9771021

Ali, Nosheen
2019 *Delusional States: Feeling Rule and Development in Pakistan's Northern Frontier*. Cambridge: Cambridge University Press.

Alimia, Sanaa
2019 "Performing the Afghanistan–Pakistan Border through Refugee ID Cards." *Geopolitics* 24, no. 2: 391–425. https://doi.org/10.1080/14650045.2018.1465046

Amoore, Louise
2006 "Biometric Borders: Governing Mobilities in the War on Terror." *Political Geography* 25, no. 3: 336–51. https://doi.org/10.1016/j.polgeo.2006.02.001

Anwar, Nausheen
2013 "Negotiating New Conjunctures of Citizenship: Experiences of 'Illegality' in Burmese-Rohingya and Bangladeshi Migrant Enclaves in Karachi." *Citizenship Studies* 17, no. 3–4: 414–28. https://doi.org/10.1080/13621025.2013.793070

Appadurai, Arjun
1986 *The Social Life of Things: Commodities in Cultural Perspective*. Cambridge: Cambridge University Press.

Beduschi, Ana
2019 "Digital Identity: Contemporary Challenges for Data Protection, Privacy, and Non-Discrimination Rights." *Big Data & Society* 6, no. 2. https://doi.org/10.1177/2053951719855091

Benjamin, Ruha
2019 *Race after Technology: Abolitionist Tools for the New Jim Code*. Cambridge: Polity.

Bouk, Dan
2017 "The History and Political Economy of Personal Data over the Last Two Centuries in Three Acts." *Osiris* 32, no. 1: 85–106. https://doi.org/10.1086/693400

Breckenridge, Keith
2014 *Biometric State: The Global Politics of Identification and Surveillance in South Africa, 850 to the Present*. Cambridge: Cambridge University Press.

Breckenridge, Keith, and Simon Szreter, eds.
2012 *Registration and Recognition: Documenting the Person in World History*. Oxford: Oxford University Press.

Caplan, Jane, and John Torpey, eds.
2001 *Documenting Individual Identity: The Development of State Practices in the Modern World*. Princeton, N.J.: Princeton University Press.
Carsten, Janet, ed.
2000 *Cultures of Relatedness: New Approaches to the Study of Kinship*. Cambridge: Cambridge University Press.
Castelle, Michael
2013 "Relational and Non-Relational Models in the Entextualization of Bureaucracy." *Computational Culture*, no. 3.
Chhotray, Vasudha, and Fiona McConnell
2018 "Certifications of Citizenship: The History, Politics, and Materiality of Identity Documents in South Asian States and Diasporas." *Contemporary South Asia* 26, no. 2: 111–26. https://doi.org/10.1080/09584935.2018.1471042
Clarke, Morgan
2007 "The Modernity of Milk Kinship." *Social Anthropology* 15, no. 3: 287–304. https://doi.org/10.1111/j.0964-0282.2007.00022.x
Cohen, Lawrence
2019 "The 'Social' De-duplicated: On the Aadhaar Platform and the Engineering of Service." *South Asia: Journal of South Asian Studies* 42, no. 3: 482–500. https://doi.org/10.1080/00856401.2019.1593597
Cole, Simon
2001 *Suspect Identities: A History of Fingerprinting and Criminal Identification*. Cambridge, Mass.: Harvard University Press.
Das, Veena
2007 "The Signature of the State: The Paradox of Illegibility." In *Life and Words: Violence and the Descent into the Ordinary*, 162–83. Berkeley: University of California Press.
Douglas, Mary
1986 *How Institutions Think*. Syracuse, N.Y.: Syracuse University Press.
Engelke, Matthew
2008 "The Objects of Evidence." *Journal of the Royal Anthropological Institute* 14, no. S1: S1–S21. https://doi.org/10.1111/j.1467-9655.2008.00489.x
Ferguson, James
2015 *Give a Man a Fish: Reflections on the New Politics of Distribution*. Durham, N.C.: Duke University Press.
Gates, Kelly A.
2011 *Our Biometric Future: Facial Recognition Technology and the Culture of Surveillance*. New York: New York University Press.
Gell, Alfred
1998 *Art and Agency: An Anthropological Theory*. Oxford: Clarendon Press.
Haggerty, Kevin D., and Richard V. Ericson
2000 "The Surveillant Assemblage." *British Journal of Sociology* 51, no. 4: 605–22. https://doi.org/10.1080/00071310020015280
Haraway, Donna
1997 *Modest-Witness@Second-Millennium.FemaleMan-Meets-OncoMouse: Feminism and Technoscience*. New York: Routledge.
Hoag, Colin
2011 "Assembling Partial Perspectives: Thoughts on the Anthropology of Bureaucracy." *PoLAR: Political and Legal Anthropology Review* 34, no. 1: 81–94. https://doi.org/10.1111/j.1555-2934.2011.01140.x
Hosein, Gus, and Carly Nyst
2013 *Aiding Surveillance*. London: Privacy International.
Hull, Matthew S.
2012 "Documents and Bureaucracy." *Annual Review of Anthropology* 41: 251–67. https://doi.org/10.1146/annurev.anthro.012809.104953

Leinaweaver, Jessaca B.
2008 *The Circulation of Children: Kinship, Mobility, and Morality in Ayacucho*. Durham, N.C.: Duke University Press.
Lyon, David
2009 *Identifying Citizens: ID Cards as Surveillance*. Cambridge: Polity.
Madianou, Mirca
2019 "Technocolonialism: Digital Innovation and Data Practices in the Humanitarian Response to Refugee Crises." In *Routledge Handbook of Humanitarian Communication*, edited by Lilie Chouliaraki and Anne Vestergaard, 1: 185–202. London: Routledge.
Magnet, Shoshana
2011 *When Biometrics Fail: Gender, Race, and the Technology of Identity*. Durham, N.C.: Duke University Press.
Mathur, Nayanika
2016 *Paper Tiger: Law, Bureaucracy, and the Developmental State in Himalayan India*. Cambridge: Cambridge University Press.
Mauss, Marcel
1954 *The Gift: The Form and Reason for Exchange in Archaic Societies*. Translated by W. D. Halls. New York: W. W. Norton.
Mukherjee, Rahul
2014 "Interfacing Data Destinations and Visualizations: A History of Database Literacy." *New Media & Society* 16, no. 1: 110–28. https://doi.org/10.1177/1461444813495184
Nair, Vijayanka
2021 "Becoming Data: Biometric IDs and the Individual in 'Digital India.'" *Journal of the Royal Anthropological Institute* 27, no. S1: 26–42. https://doi.org/10.1111/1467-9655.13478
Navaro-Yashin, Yael
2007 "Make-Believe Papers, Legal Forms, and the Counterfeit: Affective Interactions between Documents and People in Britain and Cyprus." *Anthropological Theory* 7, no. 1: 79–98. https://doi.org/10.1177/1463499607074294
Navne, Laura E., and Mette N. Svendsen
2022 "De Novo Kin: Sharing Data, Shielding Persons, and Forging Relatedness in Precision Medicine." *Journal of the Royal Anthropological Institute* 28, no. 4: 1159–76. https://doi.org/10.1111/1467-9655.13817
Nilekani, Nandan, and Viral Shah
2016 *Rebooting India: Realizing a Billion Aspirations*. London: Penguin.
Qasmi, Ali Usman
2024 *Qaum, Mulk, Sultanat: Citizenship and National Belonging in Pakistan*. Stanford, Calif.: Stanford University Press.
Raheja, Natasha
2022 "Governing by Proximity: State Performance and Migrant Citizenship on the India-Pakistan Border." *Cultural Anthropology* 37, no. 3: 513–48. https://doi.org/10.14506/ca37.3.09
Raman, Bhavani
2012 "The Duplicity of Paper: Counterfeit, Discretion, and Bureaucratic Authority." *Comparative Studies in Society and History* 54, no. 2: 229–50. https://doi.org/10.1017/S0010417512000023
Rao, Ursula
2013 "Biometric Marginality: UID and the Shaping of Homeless Identities in the City." *Economic and Political Weekly* 48, no. 13. https://www.jstor.org/stable/23391467
Rao, Ursula, and Vijayanka Nair
2019 "Aadhaar: Governing with Biometrics." *South Asia: Journal of South Asian Studies* 42, no. 3: 469–81. https://doi.org/10.1080/00856401.2019.1595343

Sahlins, Marshall
2013 *What Kinship Is—And Is Not*. Chicago: University of Chicago Press.
Schoemaker, Emrys, Dina Baslan, Bryan Pon, and Nicola Dell
2021 "Identity at the Margins: Data Justice and Refugee Experiences with Digital Identity Systems in Lebanon, Jordan, and Uganda." *Information Technology for Development* 27, no. 1: 13–36. https://doi.org/10.1080/02681102.2020.1785826
Scott, James C.
1998 *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*. New Haven, Conn.: Yale University Press.
Sengoopta, Chandak
2003 *Imprint of the Raj: How Fingerprinting Was Born in Colonial India*. London: Pan Macmillan.
Singh, Pawan
2021 "Aadhaar and Data Privacy: Biometric Identification and Anxieties of Recognition in India." *Information, Communication & Society* 24, no. 7: 978–93. https://doi.org/10.1080/1369118X.2019.1668459
Singh, Ranjit, and Steven Jackson
2021 "Seeing Like an Infrastructure: Low-Resolution Citizens and the Aadhaar Identification Project." *Proceedings of the ACM on Human-Computer Interaction* 5, no. CSCW2, article 315:1–26. https://doi.org/10.1145/3476056
Sriraman, Tarangini
2019 *In Pursuit of Proof: A History of Identification Documents in India*. Oxford: Oxford University Press.
Strathern, Marilyn
1988 *The Gender of the Gift: Problems with Women and Problems with Society in Melanesia*. Berkeley: University of California Press.
Weitzberg, Keren
2020 "Biometrics, Race Making, and White Exceptionalism: The Controversy Over Universal Fingerprinting in Kenya." *Journal of African History* 61, no. 1: 23–43. https://doi.org/10.1017/S002185372000002X
Weitzberg, Keren, Margie Cheesman, Aaron Martin, and Emrys Schoemaker
2021 "Between Surveillance and Recognition: Rethinking Digital Identity in Aid." *Big Data & Society* 8, no. 1. https://doi.org/10.1177/20539517211006744
Weston, Kath
2001 "Kinship, Controversy, and the Sharing of Substance: The Race/Class Politics of Blood Transfusion." In *Relative Values: Reconfiguring Kinship Studies*, edited by Sarah Franklin and Susan McKinnon, 147–74. Durham, N.C.: Duke University Press.
Zamindar, Vazira Fazila-Yacoobali
2007 *The Long Partition and the Making of Modern South Asia: Refugees, Boundaries, Histories*. New York: Columbia University Press.