Name: Dakhu / दाखु W/O Dilip Singh/ दिलीप सिंह

Age: 99 years

UID:

Mob No.: -

Address: village bavadi ki guar, po-barar/ नि बावडी की गुआर पो बरार

Dilapidated house, no electricity connection. No children and lives alone. BPL family but not receiving wheat from PDS since last 12 months. Partially blind and cannot walk. If neighbors give her some food, then she has a meal. Pension stopped since 6 months.

RajSSP record: Dead on 3/3/2016

RANJIT SINGH

"THE LIVING DEAD"

Orphaning in Aadhaar-Enabled Distribution of Welfare Pensions in Rajasthan

INTRODUCTION: LIVES OF DATA RECORDS

It was a hot, humid, and overcast day on 24 September 2016 in Ranchi, Jharkhand, India. Right to Food (RTF) activists assembled for the second day of a convention on the implementation of the Public Distribution System (PDS) of subsidized food grains to below-poverty line families. Gathered in a school classroom for a workshop addressing the use of technology to exclude beneficiaries, a group of RTF activists discussed Aadhaar (*translation:* foundation), India's biometrics-based national identification infrastructure. The discussion focused on the challenges of using Aadhaar to distribute social welfare. In 2010, the government launched Aadhaar to uniquely identify every Indian resident. Implemented under the supervision of the Unique Identification Authority of India (UIDAI), Aadhaar is based on three biometric modalities (ten fingerprints, two iris scans, and a facial photograph) and basic demographic information (name, age, gender, and residential address), and assigns a unique 12-digit number to every enrolled resident.[1] Aadhaar is currently the largest biometric database in the world with more than one billion enrollments.[2] It is promoted as a seamless mechanism to identify citizens in last mile delivery of welfare services, such as the PDS, through its three infrastructural processes: enrollment, seeding, and authentication.[3] Enrollment involves the collection of biometric and demographic data from Indian residents by public/private agencies. Seeding entails adding Aadhaar numbers of residents to PDS database records or on databases of any other service to aid in processes of unique identification and in removing duplicate entries. Finally, authentication verifies a resident's identity through Aadhaar when they claim subsidized food grains or avail any public/private service. In the process of accessing government services through Aadhaar, residents are administratively recognized as Indian citizens. Operationalized as a resident's "root identity," Aadhaar is gradually seeded into their other domain-specific identities (such as ration cards for PDS) used by various government departments.[4]

I thought this workshop would be an opportunity to explore the troubles of using biometric readers to authenticate PDS beneficiaries.[5] But what followed was unexpected. Leading the workshop, Jatin,[6] a Right to Information (RTI) activist, narrated a story of his visit to a village in Rajasthan. He was conducting public hearings on welfare pensions and announced the names of pensioners who had been declared dead on Aadhaar-enabled pension records. To his surprise, many of those declared dead raised their hands in this meeting. They were alive, and their confusion was palpable. "Why were these people declared dead?" Jatin asked the bureaucrats in-charge of managing these pension records. They admitted, "it was operator's mistake." The classroom went silent. Jatin concluded, "Pensioners are alive, but computers say that they are dead!"[7]

FIG. 1 A page from documents prepared by RTI activists on "dead" beneficiaries.
Courtesy of MKSS Collective.

Imagine a database as a table with prescribed columns of data attributes that define the scope of information required for each row. A row is then a collection of information on these attributes representing a real-world entity. In any database designed to ease practices of governance, this entity represents an aspect of the everyday life of a citizen. Citizens get represented—to and by the state—through these data records. This article explores processes that sever relationships between the lives of data subjects[8]—people who are subject to data-driven practices—and their data records. It follows the bureaucratic transition involved in using Aadhaar to distribute welfare pensions to the elderly, widowed, and disabled under the National Social Assistance Programme (NSAP) in Rajasthan. During this transition, procedural changes surrounding pension disbursement and to data columns of beneficiary records created new types of citizens who were declared "dead" or "duplicates." This article tracks a story of *becoming* the "living dead"[9] by describing how data-driven marginality emerges through the mutual shaping of the lives of data subjects and of their data records.

As I demonstrate, data records have social lives of their own. They are collected, administered, materially (re)produced (for example, as an identity card), circulated, used, and enacted over time and across places for a variety of purposes. A driving license not only represents a data subject's ability to drive but is also a proof of citizen identification and permits access to a variety of government services. These records are shaped by human work and the organization of data-driven governance and shape the lives of citizens as data subjects. Citizens—in imagined seamless digital mediations of their relationships with the state—are expected to competently manage their data records and efficiently represent themselves to the state. "Government will disappear from people's everyday lives," explain the members of Aadhaar's design team, Nandan Nilekani and Viral Shah. "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."[10] Importantly, however, neither of these digital mediations are seamless,[11] nor are citizens uniformly competent in managing their records.[12] Such digital mediations in practice are deeply entangled with citizens' lives and their data records. In this article, I focus on these entangled mediations to illustrate how data-driven marginality is produced when biometrics-based data infrastructures increasingly form the "invisible background"[13] of administering citizen records in India. In the next section, I begin with providing a brief overview of scholarship from infrastructure studies to outline how data-driven marginality silences the lived experiences of citizens through processes of building and maintaining data infrastructures.

CONCEPTUALIZING ORPHANING FROM A DATA INFRASTRUCTURE

"None of the above" doesn't mean anything specific; it is a way of silencing lived experience. It works to create non-people… who do invisible work and have invisible lives.
—Susan Leigh Star[14]

Canonical research in infrastructure studies has shown how data infrastructures, built around a community of practice, are relational and ecological resources that accomplish distributed and collaborative work.[15] Acting as tools that standardize practices, infrastructures are classification systems with unevenly distributed consequences. Infrastructures "create both opportunities and limits;

they promote some interests at the expense of others."[16] Focusing on the lived experience of those who struggle at the margins of an infrastructure, Bowker and Star have conceptualized "torque": situations when "the 'time' of the body and of [its] multiple identities cannot be aligned with the 'time' of the classification system."[17] Bowker and Star illustrate how people at the margins of Apartheid race classification system experienced torque. Specifically, they use an example of a woman who "might be of Indian national origin classified as Asian, married to a man classified as coloured, and live in a coloured zone but only be able to work or go to school in an Asian zone."[18]

The concept of torque addresses the lived experience of misalignment between an individual and their own data records. In attempting to resolve such problems, administrative processes lead to the emergence of "residual categories," typically represented by the choice of "none of the above."[19] Residual categories doubly silence marginal people. They render marginal people invisible to the so-called "normal" categories of data infrastructures and produce accounts that do not represent individual identities and social histories. Star, in her later work, calls such uncategorizable marginal people who end up into residual categories "orphans of infrastructure."[20] She outlines several ways whereby people may find themselves as residual: they may not be known to a system; they may fall into two or more categories when only a single choice is permitted; they may fall outside the representational scope of a classification system; they may not be believed by data clerks or data clerks do not perform their data entry competently. Unquestionably, categories create binaries. If some data subjects fit into categories, arguably, there are others who do not. Representations of data subjects who do not neatly fit into data infrastructure categories are erased by placing them in residual categories. Following the unevenly distributed consequences of implementing and using data infrastructures is required in the study of liminal experiences of residuality.

In this article, I follow the unevenly distributed consequences of a biometrics-based unique identification infrastructure by focusing on the work of both bureaucrats and citizens who mutually shape the administration of citizen data records. Residual categories are results of "infrastructuring"[21]—the process by which existing work practices are reconfigured through digital technologies in the building of data infrastructures. Residuality, however, is not a given. It remains fluid and in flux, as infrastructuring unfolds over time and across places. I argue that infrastructuring simultaneously triggers orphaning from a data infrastructure. Orphaning is constituted by processes that sever or disconnect relationships between the life of a data subject and its representation, through data records that produce conditions of data-driven marginality. In governance practices, this process unfolds over time, in places where data records are registered, circulated, and interpreted by bureaucracies to represent citizens and used by citizens to represent themselves, and produces precarious forms of citizenship.

There are many ethnographic accounts that describe how marginality is reproduced in state development projects aimed at inclusive development.[22] I contribute to this literature by showcasing how the processes of representing and claiming representation through data records in state-managed data infrastructures engender conditions of data-driven marginality. As categories produce their inverse, so do processes. Infrastructuring solutions to complex problems simultaneously produces orphans who face problems and yet struggle to meet their solutions. The following section describes the methods I used to trace the infrastructuring of Aadhaar in India. These methods also allowed me to study orphaning through Aadhaar-based mediations of state-citizen relationships over time.

FOLLOWING THE UNEVENLY DISTRIBUTED CONSEQUENCES OF DATA-DRIVEN GOVERNANCE

As an Indian citizen currently based in the United States who researches the implementation of government programs in India, my interest in the development of Aadhaar began with the state's promise of inclusion and empowerment through a biometrics-based, unique identity. I wanted to understand the Indian state's processes and challenges for achieving its promises. While for most people data infrastructures work the same way, for others they break down in uneven and distributed ways.[23] Understanding the scale and scope of this uneven distribution required my own immersion in the processes involved in infrastructuring Aadhaar. I started my research by analyzing public documents and other written records about the implementation of Aadhaar's infrastructural processes (enrollment, seeding, and authentication). To follow the cascading impact of these processes, I conducted three rounds of multi-sited fieldwork in India: first between June 2015 and January 2016; then between July 2016 and January 2017; and lastly, between January 2018 and March 2018. [24] With an aim to produce a "multi-sited ethnography"[25] of infrastructuring Aadhaar, I "followed the actors"[26] involved in designing, implementing, and using it.

I started with specific locations: startup workspaces in Bengaluru, bureaucratic offices of Aadhaar-related services, and the Supreme Court of India. Visiting these places helped me understand the technical, political, policy, administrative, and legal dimensions of designing and implementing Aadhaar. I also followed RTF activist organizations in Delhi to map the uneven consequences of using Aadhaar in last mile delivery of welfare benefits. My fieldwork with RTF activists involved participating in their quantitative surveys on PDS implementation at various sites in Chandigarh in 2015 and Delhi in 2016, attending their meetings with PDS beneficiaries and all-hands meetings in Delhi and Ranchi in 2016, reading their letters to bureaucrats, and interviewing them. Over time, I began noticing a wider pattern of orphaning emerging in the cascade of the infrastructural processes of Aadhaar in these field encounters; failures in accomplishing the initial processes (such as enrollment and seeding) magnified ramifications for processes that followed (such as authentication). Given the length constraints, in this article I can only provide a snapshot of my ethnography with excerpts from bureaucratic documents, news stories, and conversations with activists related to Aadhaar-enabled delivery of welfare pensions in Rajasthan. However, this snapshot empirically grounds the lived experience of orphaning as a process that emerges through the unevenly distributed consequences of infrastructuring Aadhaar.

TOWARDS AADHAAR-ENABLED DELIVERY OF WELFARE PENSIONS

The NSAP, launched in 1995, involves a set of social security pension schemes funded by the central government of India. The three schemes relevant to the case study are pension schemes for the elderly, that began in 1995, and pension schemes for the widowed and the disabled, launched in 2009. These schemes involve transfer of funds from central to state governments, which distribute welfare pensions to the "destitute having little or no regular means of subsistence from his/her own sources of income or through financial support from family members or other sources."[27] At the central level, the Ministry of Rural Development distributes funds to states. States define their own eligibility criteria for "destitution" and have flexibility in implementing these schemes through any of its departments. In Rajasthan, the state government's Social Justice and Empowerment Department (SJED) administers these schemes along with additional state social security schemes for the same populations. Together,

these central and state schemes are called Social Security Pension Scheme (SSPS). Under the SSPS, pensioners aged 75 or older receive ₹1000 (~$14) per month. Pensioners below the age of 75 receive ₹750 (~$10.50). Disabled pensioners in all categories receive ₹750 (~$10.50) per month.[28]

Data must be collected before it can ever be used to govern. In the case of Aadhaar, data represents only enrolled residents, who must initially prove that they are eligible for pension under the state government's definition and criteria of "destitution" for Indian citizens. Once this is proven, their data is recorded on SPSS databases. The following criterion exemplifies how challenges in securing a data record on welfare databases can engender residuality. In most states, persons with disabilities are eligible for pension when they produce a doctor's certificate verifying that their capacity to make a living is reduced by at least 40% because of their disability. However, how does one mathematically evaluate the impact of a disability on a person's capacity to earn a living? RTF activists discussed this conundrum at length during the convention. Scholars have also noted how "criteria such as the loss of or inability to use one or more limb, blindness in both eyes, etc. are used in practice."[29] Paras, an RTF activist leading the workshop along with Jatin, told the story of a disabled pensioner from a small village in Telangana who stopped receiving his pension:

> Earlier he used to receive pension on time. Recently, during my field visit, he told me that he stopped receiving it from the past six months. Despite making complaints, he had no idea what happened. Later, we found out that the [Telangana] government has changed the eligibility criteria for disability pensions. To prove eligibility, applicants must go to a hospital and obtain a computerized receipt measuring the extent of their incapacitation.… To what extent is a person disabled? A machine will evaluate this. I don't know what doctors do in this process.… When we talked with administrators about how he used to receive pension earlier and has a certificate from a government doctor saying that he is more than 40% disabled, they said, "We don't know whether the government doctor was correct or wrong, but the computer does not say that he is."… We must stop this blind belief in technology.[30]

While this story is a classic case of exercising "mechanical objectivity"[31]—a form of objectivity embedded in rule-following—in bureaucratic work, I wish to draw attention to the data record of this excluded pensioner. Initially, his record adequately represented him in the process of receiving pension. Following the change in eligibility criteria, it was marked as requiring additional documents (the computerized receipt). He was unable to secure this computerized receipt and his record became defunct. While his disability had never changed, the data record pertaining to his disability had. The consequences of this change began with the pensioner no longer receiving his pension. These pensions are often a major subsistence resource for pensioners. Changes in pension records can have cascading impact on their life chances.

On 1 January 2013, the central government launched the Direct Benefits Transfer (DBT) programme to simplify the flow of funds and to accurately target beneficiaries.[32] Within this scheme, Aadhaar numbers of beneficiaries are seeded to their welfare database records. At the same time, beneficiaries are expected to seed their Aadhaar numbers to their bank accounts. Benefits are transferred directly from the central government into Aadhaar-enabled bank accounts of beneficiaries.

The Aadhaar number acts as the financial address of beneficiaries, while the lists of beneficiaries are maintained by state governments. RTF activists are not entirely against this change. Ashok, an RTI activist who works in Rajasthan, explains:

> From the government's perspective, the use of bank accounts makes sense. Before DBT, pensions were sent to beneficiaries through money orders. Now, there were many cases, where either the postman would not deliver the money order for months and then, bring all the money orders together, so that they could ask for a bribe before handing over the pension or they would not give the beneficiary the whole amount and keep some money as delivery charges or something else.
>
> There was this other case in a village where we work. When the postman came to deliver the pension, the beneficiary's son informed him that his father had passed away a week ago. Now, six months later, the son came to us and asked for help in figuring out whether his father's pension was cancelled or not. He just wanted to double-check because all he had done was to inform the postman that his father had passed away. When we checked his father's pension account, it was still active, and the postman was basically just collecting the money order. There are also cases when the family does not inform the government regarding the death of the beneficiary. Logistical problems are quite pervasive and DBT could potentially solve some of them. It removes the postman as an intermediary and allows for a more seamless check on whether the beneficiary is alive or dead. Every time authentication happens, it is also evidence that the beneficiary is alive.
>
> However, DBT brings its own problems. Authentication is not working for a large proportion of the elderly population and there are other infrastructural deficiencies. For example, there are more post offices than banks in remote areas. If a post office is a kilometer away, banks are sometimes 20 to 30 kms. away. So, the government keeps talking about setting up banking correspondents who will deliver banking services at your doorstep in rural areas. This solution brings the problem back to square one. You are just replacing the postman with the banking correspondent.[33]

In Rajasthan, pensions were digitally delivered prior to the implementation of DBT. In 2011, the government launched the Online Social Security Pension System, Rajasthan (RAJSSP)—a web-based solution to facilitate and maintain pensioner information, verification of pensioners, sanctioning of pension, and disbursement of pension payments. It also eased the processes of printing money orders and generating electronic money orders. A report on RAJSSP prepared by the Center for Innovations in Public Systems (CIPS) has noted that

> the cost of delivering services in the earlier system included the manpower cost involved in repetitive non-value added services and in writing money orders in thousands.… Electronic data exchange with banks and post offices, instead of bulky money orders, also saves cost of printing the money orders. Besides, printing of money orders save lots of time when compared to writing with hands.[34]

The report further notes that identification of beneficiaries and data collection was assigned to street-level bureaucrats: the Patwari (the local land records officer) and the Tehsildar (the local tax inspector). This became a task they performed in addition to their respective work.

In February 2015, the state government issued a circular instructing local bureaucracies to start working towards Aadhaar-enabled pension delivery in Rajasthan.[35] A journalist named Anumeha Yadav reported on this development in the Rajsamand district of Rajasthan, stating its enrollment process required beneficiaries to provide their Aadhaar-enabled bank account, Aadhaar, and Bhamashah numbers.[36] Bhamashah numbers are issued by the state government under the Bhamashah Yojana, which began in 2008 as a means to register citizens in financial inclusion initiatives. This scheme also started before the central government launched Aadhaar. Citizens were required to provide both Aadhaar and Bhamashah numbers to enroll in Rajasthan government projects, as the state bureaucracy uses both numbers as the financial addresses of beneficiaries. Quoting Prakash Shirshat, the Block Development Officer of the area, Yadav describes problems during this data collection:

> In many instances, people did not have all three.… Even those who did, had errors.… Their address, age were wrongly listed.… We could not have done the "seeding" ourselves, so we got the e-Mitra [local e-governance service provider] to do it.… These operators made errors and fed in wrong data, and this was then "frozen" against the beneficiaries' names. Since everything was being done in English, it was harder to keep a check on spelling errors as well.[37]

Before this process was completed and its errors rectified, the SJED switched to DBT in October 2015 and pensions were directed to Aadhaar-enabled bank accounts of beneficiaries. The errors in data collection had a cascading effect. Pension payments did not reach "lakhs [100 thousands] of beneficiaries. On March 8 [2016], six months later, with lakhs in payments lying uncollected, the Finance Department issued instructions to 'stop pensions immediately in case of pensioners who had not been located and physically verified.'"[38]

Following these orders, SJED temporarily revoked the pension of about one million out of approximately 6.8 million beneficiaries. Out of these one million beneficiaries, the pensions of approximately 757,000 beneficiaries were later cancelled on a variety of grounds.[39] A local Rajasthan newspaper provided a list of reasons (see FIG. 2) for these cancelled pension accounts.

Noticeably, there are emergent forms of residual categories in their listed reasons. Apart from the classic category of "other," the categories of "dead" and "duplicate" produce new forms of data-driven marginality for beneficiaries who are neither dead nor duplicated. An innate distance develops when representing a person through data records. Citizens become data subjects and occupy a limited role in the processing of their data records across various bureaucratic realms. Equally, exercising judgments about data records is not necessarily easy for bureaucrats. The deeper a bureaucrat is buried in a dataset, the harder it becomes to imagine a reality outside it. Declaring a data subject "dead," for example, is easier to do within a data record than in person. Data collection and the verification of beneficiary records is and remains an arduous task.

Reason for cancelling pension account	Number of pensioners affected
The beneficiary is "dead"	295,194
The beneficiary is a "duplicate"	172,758
Total "dead" and "duplicate" beneficiaries	**467,952**
Inadequate documentary proof of eligibility	744
The beneficiary is ineligible	64
Based on age as an eligibility criterion	13,015
Based on income as an eligibility criterion	7,934
Other	238,502
Central Government employee	25,977
Widow re-marriage	3,047
State Government employee	3,191
Total	**757,462**

FIG. 2 Reasons for canceling pension accounts.

In the process of reverifying the records of these one million pensioner records, errors in data records collected by "local e-governance service providers whose only qualification is to be high school graduates"[40] magnified in scope and impact:

Officials now admit that pensioners were wrongly declared as dead or as duplicate entries because door-to-door verification was not done at all.

"[Local government staff] were instructed to go door to door, but they had no vehicles," said an official. "Some took a lift from someone, some simply asked the neighbours and did not meet the family or the pensioner directly."

He added: "Even if these staff could not find the pensioner, they were required to submit why the pension by beneficiaries had not been collected for six to nine months. Most chose one of two options, recording the person as having died, or migrated."[41]

When RTI activists started collecting the records of so-called "dead" pensioners from government offices, traveling around villages in Rajasthan to confirm pensioners' mortality, pensioners began protesting the incorrect recategorization of their data records. This story made national news headlines.[42] To create public awareness on this issue, RTI activists created a document with photos of declared dead pensioners (FIG. 1). The Rajasthan state government promised to investigate, and pensioners slowly started receiving their pensions again.[43] Ultimately, the government reinstated 500,000 beneficiaries whose pensions were cancelled across the state.[44]

Following this reinstatement, Jatin describes a new challenge faced by RTI activists during his workshop: "now when you check the pensioner portal for information on who is receiving pension and who is not, the government has removed the column that contains information about why the pension was discontinued. It just tells you that the pension has been discontinued."[45] Situating the column's absence as a new challenge for RTI, Jatin went on to ask, "Why can't we see that column anymore? If it is a social welfare program, I as a citizen have as much right to know about its implementation as the government does. Why can't I see what a babu [street-level bureaucrat] can see? We need a Janata [People's] Information System for pensions too." [46]

Janata Information System (JIS) was devised by village government officials in collaboration with RTI. This system is used by activists to track implementation of Mahatma Gandhi Rural Employment Guarantee Act (MNREGA)—which is aimed at enhancing livelihood security in rural areas by providing at least 100 days of employment as unskilled labor to members of below-poverty line families.[47] It is displayed on the walls of the panchayat (village-level local government) building with the following information:

					Financial year			
S. No.	Name of the Head of the Household	Father / Spouse's name	Job Card No.	Category	No. of days during which work was provided under MNREGA	Payment received	Benefits received (Indira Awas Yojna, pensions)	Amount of benefits received

FIG. 3 Details of MNREGA Job Card Holders displayed on the walls of the panchayat building.

As a display of data records on a public wall, the JIS acts as an artifact of the mutual shaping of data records and everyday lives of citizens-as-data subjects through practices of governance. It raises the same questions of transparency and accountability in governance, invasion of privacy and surveillance, and inclusion and marginality as digital portals for eGovernance do, but with significant differences. JIS, for example, is limited in its ability to display information and its complexity when compared to digital portals. While both are intended to foster transparency and accountability in governance, digital portals present a much higher barrier to access in rural contexts. JIS, on the other hand, is accessible to anyone standing in front of the panchayat building. Problematically though, JIS also publicly displays sensitive financial information of all participating welfare beneficiaries. While online databases make portability of access to data easier, JIS resolves local problems of access to information for a manual laborer who might not be digitally literate. JIS brings governance to walls of government buildings, inverting the claim that government buildings will disappear from people's

everyday life. The materiality of the wall and its paint make it difficult to hide a column of information about reasons for cancelled pensions. Building on JIS, I conclude with a note on how analytic attention to orphaning opens a generative space for treating marginality as a process and explore its fluidity through the becoming of infrastructures.

CONCLUSION: MARGINALITY AS A VERB

I began this article by arguing that mutual shaping of the lives of citizens as data subjects and their data records can engender precarious forms of citizenship in biometrics-based digital delivery of government services. Specifically, infrastructuring unique identification of beneficiaries to deliver welfare through biometrics simultaneously produces the process of orphaning. I demonstrated how orphaning produces new residual categories of "dead" and "duplicate" beneficiaries who struggle at the margins of the Aadhaar-enabled data infrastructure and in reclaiming their entitlements as citizens. Materializing databases through JIS, thus, is one conceivable, yet limited, intervention in the public accounting of data records management.

The story of the living dead began with infrastructuring Aadhaar into welfare pension distribution. As this infrastructuring unfolded over time, pensioners registered in the new service using their existing credentials and started receiving their pensions. This worked for 5.8 million beneficiaries. However, the remaining one million experienced orphaning when they did not receive their pension. Their data was registered incorrectly; their Aadhaar number was not seeded into their bank accounts; their records were not verified competently. Ultimately, they were put into residual categories. Each of these processes is an inversion of infrastructuring Aadhaar. However, as these orphans protested their incorrect recategorization and worked towards reclaiming their legal right to pension, they initiated new processes of infrastructuring. Incorrect data entries were corrected, Aadhaar numbers were secured and seeded into bank accounts, pensioner records were reverified, and ultimately, pensioners were taken out of residual categories. Infrastructural breakdowns are not just events[48] but also manifest in processes enacting marginality. Infrastructuring triggers orphaning; the two mutually shape each other over time and across places.

Orphaning offers a generative space to engage with the building of infrastructure. Understanding *who* is marginal facilitates the recognition of marginality as a *noun*; addressing *how* people are marginalized, by following processes that turn them into residual citizens, facilitates the analysis of marginality as a *verb*. The study of orphaning requires analytic attention to the mutual shaping of the lives of data subjects and their data records. Aadhaar has created a new category of "unique beneficiaries" in the state-managed infrastructure of welfare distribution. It simultaneously has engendered the residual category of "duplicate beneficiaries." People categorized as "duplicates" have to *infrastructure* new ways to reclaim that they are unique. Often, their rights as citizens are at stake as they navigate processes to re-establish their relationship with state-managed infrastructures. Treating infrastructure as a verb generates possibilities for understanding marginality as a state of becoming—enacted in the mutual shaping of the lives of orphans of an infrastructure and the generated residual categories. These categories shape the lives and struggles of citizens but are also shaped by their continuing efforts to resist residuality. After all, becoming offers more possibilities for infrastructural change than being.
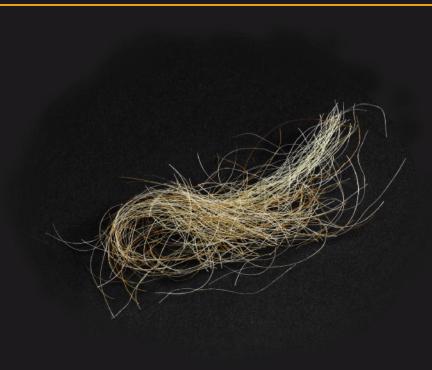
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A lock of hair, reputedly from King George III

King George III (1738-1820) ruled the United Kingdom of Great Britain and Ireland and was also king of Hanover, part of mainland Europe from 1760 to 1820. He was prone to episodes described as madness by his contemporaries. Recent tests on the hair found an unexpectedly high concentration of arsenic. Heavy metals such as arsenic can make the symptoms of a hereditary condition called porphyria worse. Porphyria can lead to severe mental imbalance and episodes of apparent madness. Other symptoms include abdominal pain, dislike of bright light, and purple urine. Some researchers believe George had this condition. Henry Wellcome bought this lock of hair at auction in 1927, enclosed within a slip of paper documenting its origin.