The single source of truth about Kenyans: collateral mysteries, credit information and Safaricom

Keith Breckenridge, 28 July 2017

Kenyans walking to work down Nairobi’s Haile Selassie Avenue on the 16th of June, 2016, were shocked to find that a pile of well-worn identity cards and driver’s licenses had been dumped during the night on the pavement outside the Jesus is Alive Ministries’ church. The muddy archive was dominated by the identity cards that Kenyans, mistakenly, call the second and third generation IDs – one, dating from 1995, is laminated, and the other, after 2011, is printed directly onto plastic. Both types of card were produced by Thales, the French parastatal, and they record and present exactly the same elements of biographical information. The two types of cards are, in other words, administratively identical. On the front side they present the key facts of modern citizenship: the card’s serial number, the holder’s identity number, full names, date of birth, sex, district of birth, place of issue, date of issue, signature, thumb-print; on the reverse the functional categories of colonial indirect rule: district, division, location, sub-location. The cards outside the church bore the signs of long use, and many carried sooty debris from having been stored outside, probably on the street, for a long time. This disorderly pile of identity tokens was quite different from the similarly sized pile of newly minted cards that had been dumped a little further up the street at the Muthurwa market in 2013. That was an unambiguously bureaucratic failure, and the cards had clearly come quite directly from one of the offices of the National Registration Bureau responsible for issuing them. The pile outside the JAM church captured more everyday tensions of registration in contemporary Kenya. The first of these is what can be called an identity mess, a proliferation of documents, numbers and registration processes, which the state and political parties have imposed on ordinary people in repetitive waves over the last twenty years, and which has long been a source of parliamentary and press complaint. The second is a general crisis of personal security on the streets, which makes it difficult for ordinary people to hold on to the contents of their wallets in the face of ubiquitous mugging and pocket-picking. A third, captured by the looming tower of the Central Bank building a few blocks further up Haile Selassie Avenue, reflects the distinctive place of the banks in the recent development of identification systems in Kenya. And the last is an absence. None of the cards in the pile was the third-generation or digital ID Kenyans have been promised for a decade: the polycarbonate sheet, laser-printed with solid colour images and etched holograms, containing, critically, a machine-readable chip and a full set of digital finger and iris biometrics. In this chapter I want to present the story of that missing card.

1 Thanks to Marion Ouma and the members of the Bhalisa list for help in making sense of this thicket. The mistakes that remain are still my own.

What I’m not doing here, now

The history of registration in contemporary Kenya should be explored along several axes that I do not follow here. This research begins on the notoriously fraught ground of state-fostered corruption in Kenya, its institutional processes and popular politics, many of them derived from the Moi era. The administrative architecture of the current Kenyan state should be traced back two or three generations, to the Shifty War on the border with Somalia in the 1960s and further back, as Branch has done, to the administrative, policing and political arrangements of the colonial state’s struggle against Mau Mau in the early 1950s. This would understand contemporary Kenya – the people and the state – as products of deeper structures of power formed by the most effective tactics of counter-insurgency. And it places Kenya on a short list of countries – Argentina, Chile, Malaysia, Philippines, India, Spain and South Africa – formed by successful programmes of counter-insurgency. These countries have also been precocious adopters of biometric identification. Certainly the Kenyan state’s ability to extract repeated rounds of registration from its people stands in contrast to the situation in similar ex-colonies like Ghana and Nigeria where appeals for mass registration have been met mostly with popular bemusement. All of these are important structural elements, but (at least in this version of the paper) I want to concentrate on the events of the last half-decade.

What’s at stake in the story of the NDRS?

This is the story of the National Digital Registry System (NDRS) – an ambitious plan for panoptic biometric registration that the Kenyan government announced in 2014, but that did not happen. There is little that is intrinsically noteworthy about unrealised grand schemes of state surveillance; in the international field of biometric identification failure has been as common as success over the last two decades, with elaborate plans falling apart in the United States, the United Kingdom and France, and a long history of failed attempts in South Africa. Institutionally the key question may be whether planners understand Beckett’s maxim: Ever tried. Ever failed. No matter. Try again. Fail again. Fail better. This kind of bloody-minded tenacity (or perhaps it is craziness) is usually a product of the convergence of political and economic interests around the compelling needs for biometric surveillance. Some of that true in this case. The NDRS story draws out the central role of credit information sharing between banks in cultivating biometric identification on the African continent. Cooperative information sharing assembles a range of powerful interests – politicians, officials, central bankers, banks, telecom firms, donors – but the NDRS project also shows that there can be

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strong disagreements about the form of the assets that credit surveillance can produce. The advocates of the Kenyan biometric plan justified it by appealing to the need for certain and secure identification, for stronger national security (and policing) and better tax coverage and recovery, but what distinguished it from the already existing plans for population registration was the effort to build a new kind of asset register, a database describing real, not informational, collateral assets. The NDRS plan proposed a joined-up architecture of state databases that brought the management of private collateral into the core of the state’s business. Aimed at the interests that the established banks had in the development of reliable, accurate and complete credit histories, it was also a radical effort to address the Hernando de Soto problem of missing collateral. This challenged the established (and World Bank – supported) processes of digitisation, which left civil registration and identification in the state’s hands and the most powerful instruments of decision-making in the marketing of personal credit, and reputational collateral, in the hands of one firm. Safaricom – a behemoth in the Kenyan economy – was able to develop forms of virtual collateral using its own automated assessment systems, and its own identification and authentication processes. The existing database was sufficient to its needs, where the banks’ CIS processes – with their demanding templates of data and very high errors of identification – faced continuous failures and material resistance. Both population registers were conceived as public-private-partnerships, with revenues derived from the identification needs of credit providers funding the costs of development, but the competing models of collateral, one physical the other informational, mobilised financial institutions – the large banks and Safaricom – that are increasingly in conflict with each other. Set against the intractable difficulty of mass identity registration in Kenya, which was amplified by a bitter and ongoing controversy around biometric voting, the collapse of the NDRS makes sense. Yet the story of its decline also makes the important point -- otherwise difficult to observe -- that new virtual property forms, data-derived and biometrically authenticated and indexed, are being rapidly fostered on the African continent. And that South African law, expertise, firms and technologies are key drivers of this process.

South Africa and Kenyan biometrics

Kenya shares a common colonial history of fingerprint-based identification with South Africa, with some interesting and important variations. The kipande dates back to the Native Registration Ordinance of 1915, and – like similar passes in South Africa from this period – it required a single thumb or finger print. These single prints – which Kenyatta famously described as “the diabolical system of fingerprints” in 1938 – had the effect of attaching documents to the physical body of their bearers, but they could not support the ten-print fingerprint registries designed by Edward Henry. They had another compelling virtue, as he pointed out, in that they were dramatically cheaper to administer. When the registration ordinance was revised in 1949 officials extended the humiliation of compulsory (single) fingerprinting to everyone in the colony – whites and Asians included – but the system could only restrict the name and location of those who chose to comply. During the Mau Mau emergency the system was briefly extended. In 1954 the colonial state imposed an exact copy of the South African dompas (then still in an early, and confident, moment) on all adult “members of the Kikuyu and allied tribes.” This booklet – the “Kikuyu, Embu & Meru Passbook” – required ten fingerprints and a laboriously maintained fingerprint registry and recorded official permissions for movement and settlement. Neither the colonial state or its successor had the resources to sustain ten print registration, and that requirement was not legally specified until the amendment to the registration of persons act in 1979. It was only

with the shift to the smaller laminated ID card in 1995 that the National Registration Bureau implemented a systematic, and automated, process of full-print registration for identity cards. From immediately after World War 1 to the Mau Mau emergency, Kenya drew directly upon the fingerprint expertise fostered in South Africa. The colony’s first fingerprint expert, WWC Burgess, was transferred from the Transvaal and Union bureaucracy, where he had been one of Gandhi’s tormentors, in 1919. He went on to become of the officer-in-charge of the Kenya Native Affairs Finger Print Bureau. In 1930 the colony sent one of its police inspectors to Pretoria for a three month course in “classifying and filing fingerprints.” And then in 1954, confronted with the sisyphean full-print registration and classification of the people living in the highlands, the colony appealed for the services of four fingerprint readers from the South African police. The commissioner of the SAP was deeply sympathetic and “would very much have liked to assist,” but, confronting an “extreme shortage of trained fingerprint experts and other technical experts” as the bewysburo absorbed all the available expertise, he could not comply. 

South Africa and digital collateral

More recently the connections between the two countries, especially in the fields of telecommunications and finance, have thickened dramatically. In May 2017, the British telecorp Vodafone swapped its 35% and $2.6 billion share in the ownership of Safaricom with an identical share in its South African subsidiary. The exchange left the South African firm and the Kenyan government with equal shareholdings in the company that dominates the Kenyan economy and defines mobile financial services internationally. Safaricom’s links with South Africa run through its founding CEO, Michael Joseph, who managed the transformation from a state-owned cellular service with 20,000 customers, ten masts, one switch and 60 employees in 2000 to a regional monopoly in 2010 with 15 million customers, 800,000 Kenyan shareholders and annual profits of Ksh 20 billion – including Ksh 7.5 billion derived from M-Pesa, the mobile money platform that was introduced in 2007. If Safaricom represents a tangible connection between the Kenyan and South African economies, many of the key institutional drivers of financialization are much less visible. Chief amongst them are the legal, administrative and technological arrangements for credit information sharing, which, with encouragement from the World Bank, the UK Department for International Development and more recently the Gates Foundation, have drawn heavily on South Africa’s...


\[10\] Joseph is one of the small group of brash South African engineers and accountants – others include Serge Belamant, Laurie Dippenaar, Adrian Gore, Allan Gray, Douw Steyn – who built very large firms by riding the wave of networked financialization in the 1990s.
experience and expertise. The credit bureaus, the banks and micro-lenders, and the NGOs that support them are organised by the Credit Information Sharing Association of Kenya CISKenya, a lobbying group that was founded in 2009. These two institutions – Safaricom and CISKenya – were also hidden protagonists in the struggle over the fate of the NDRS.

**Clean, complete, correct**

*Gatabaki's announcement*

The plan to register the entire population “afresh” was first made public at the ConnectedKenya conference in Mombasa in April 2014. It was presented by Mwende Gatabaki, a former executive of the African Development Bank who had been seconded to the office of president Uhuru Kenyatta to assemble a new government agency that would unify the different functions of birth and death registration, the registration of aliens and refugees, and the issuing of identity cards, which were spread across the detached Departments of Civil Registration, Immigration, Refugee Affairs and the National Registration Bureau.11 The act establishing the new service had been passed in 2011 – it called for a new co-ordinating agency that would develop a unique identifier for every person, manage all issues relating to citizenship and immigration, and maintain a comprehensive and accurate national population register. Gatabaki’s astonishing plan drew on the heightened public concern around national security in the wake of the 2013 attacks to lay out potentially revolutionary reorganisation of the entire Kenyan state around a “single source of truth.” A new database that would link together existing and new registries of population, land holdings, companies and moveable assets. In her presentation Gatabaki stressed that the project was based in the presidency, that it would revitalise the Kenyan bureaucracy, provide citizens with meaningful security, and allow those with moveable assets, like cattle, to leverage them financially. And she argued that the new database and registrations would be significantly cheaper than the cost of upgrading existing but separate projects of registration and identification underway in the separate departments. To do all of this required a break with the existing forms of paper registration and a new set of purely digital biometrics from every person in the country. “Some time in June we’ll actually do a digital registration, or a digital drive,” she explained:

> “where we will ask everybody to actually come along and bring their documents, their IDs, their birth certificates. We’ll do biometrics, we’ll do the eye scans, we’ll do the fingerprinting. We’ll scan your documents and we’ll create a digital record for every Kenyan. Then we are going to use the existing data to just verify that what we are capturing is indeed what is already in the system. Where we have issues we will verify and validate, and we establish a clean database. So the timeframe for that is six months, up to August, because we started doing this in March.” 12

This initial presentation made no mention of a new digital ID card, but the following day the CEO of the state ICT Authority explained that the government was preparing to spend nearly $100 million on the new database and that the new “ID cards will have a chip or magnetic

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Gatabaki’s emphasis on a compulsory national round of digital registrations was controversial, to put it mildly, because many Kenyans – especially those supporting the CORD coalition that was kept from power – were still furious about the biometric debacle staged during the previous year’s national elections. In a case study of the “techno-election” gone hay-wire, the biometric voter identification kits supplied by the South African firm, Face Technologies, ran out of power, the cellular network required to submit returns failed, and the disk-partition on the single server compiling them was allocated insufficient disk space. The official enquiry into this mess, accusations of corruption and other ongoing controversies over the cost and licensing of the biometric kit – including Safran Morpho’s levying a license fee on all future uses of the equipment purchased in 2013 – dominated public debate until the end of 2015.

It is no exaggeration to say that in Kenya biometric registration is the main arena of a bitter struggle over state power, and it was hardly surprising that the opposition leaders immediately responded to “the move to register all afresh” by “claiming that it was a scheme to rig the next elections.” And political mistrust was not the only serious problem, as the Consumer Federation observed: over the previous decade the procurement processes the new identity card had repeatedly collapsed into a mess of conflicting corruption allegations.

Two previous collapses (2009, 2012)

The third generation card was first announced publicly in 2007 in the wake of an investigation by the Kenyan National Commission on Human Rights (KNCHR) into accusations of widespread corruption and discrimination in the issuing of IDs. The commission’s concerns were split evenly between the general complaint about the cash bribes officials required to perform basic administrative services and the more specific accusation that Somali-Kenyans were being systematically denied identity cards and their basic rights as citizens. Behind both worries lurked fears about the fragility of the laminated card. The notorious weakness of the cards had much to do with the seven digit identity number that began poetically with


President Moi as 0000001 and his deputy Mwai Kibaki as 0000002 and the vulnerability of
the registry that was being used to authenticate claims for citizenship. In 2007 the main
archives of the National Registration Bureau (issuer of the ID cards) contained the scanned
records of the inked fingerprints of 14 million Kenyans. In an attempt to bolster the identity
card system, and the integrity of the register that authenticated applications for cards, the
KNCHR called for the fast-tracking of a biometric database – the Integrated Population
Registration System (IPRS). In 2009 the development of that system was awarded, apparently
without controversy, to a consortium from the Ukraine called EDAPS.  

Corruption accusations and ID tenders

The appointment of a contractor for the production of the third generation cards was not so
simple. The 2005 Anglo Leasing scandal – where the Kibaki government was notoriously
implicated in the payment of a massively inflated tender to a British shell company for the
printing of passports – loomed in the background of the tenders for the identity cards. The
processes were fraught and contested, especially as losing bidders could bring show-stopping
appeals to the Public Procurement Oversight Authority after 2007. The call for tenders for the
new cards was issued in May 2009, specifying a “Third Generation ID Card” with the
establishment of an “elaborate infrastructure supported by appropriate software modules,
including installation of live data capture equipment both at the headquarters and in the field
offices, personalization centre and a centralized database production facility, complete with
the necessary biometric and facial recognition features.” The government allocated US$10
million to the project, and the international biometrics giants all submitted proposals. In
September that same year the whole process came to a sudden halt when NADRA, the
Pakistan identification agency (who were making Kenyan passports) raised a successful
protest about the decision making of the tender board. Thales continued sporadically printing
the laminated cards, but in July 2011 the cabinet refused to endorse their ongoing production,
and the issuing of new IDs stopped completely – prompting something like a national
emergency. The Ministry of Immigration and Registration of Persons issued a second tender
in 2011 but that succumbed in the same way when the French ID contractor Imprimerie
Nationale protested its exclusion on the basis of the tender board’s dodgy paperwork. With
the 2013 election looming, the ministry had little choice but to extend Thales’ contract to print
the backlog of 2 million – and then 4 million – of the new plastic (but not third generation)
cards. In the 2013 national budget the money that had been sitting unspent in the Ministry
was sucked back into the general fiscus.  

a Holistic Approach to Citizen Identification” (ICAO MRTD Meeting, Montreal, 2014).
18 Wrong, It’s Our Turn to Eat.
19 Ministry of Immigration and Registration of Persons, ”EOI for the Design, Supply, Installation and
Commissioning of the Third Generation National Identity Card System Based on Smart Card Technology,” May
(2009), http://ppoa.go.ke/images/downloads/arb-decisions/2009-
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The Nation, April 21, 2010; Renson Mnyamwezi, “Government Will Issue IDs Ahead of Polls, Says PS,” The
Standard, September 2, 2011, https://www.standardmedia.co.ke/article/2000042006/government-will-
issue-ids-ahead-of-polls-says-ps; Justus Ochieng, “Four Million People Require National IDs,” Nairobi Star,
November 15, 2011; Public Procurement Administrative Review Board, “REVIEW NO. 25/2012,” May 25,
Benson Wambugu, “Kenya Nullifies ID Cards Tender,” Business Daily, July 5, 2012,
12g04xvz/index.html; George Ngigi, “Sh1.5bn Set aside for ID Kits Withdrawn,” Business Daily, January 6,
were concerned, when Mwende Gatabaki arrived in the office of the Kenyan president in February 2014.

**Edaps and IPRS**

Meanwhile the Ukrainian developers working for the EDAPS consortium – by this time (its home market obliterated by civil war) a company that existed only to service the Kenyan government – was busily working to build the Integrated Population Register System (IPRS), linking together the main repositories of identification and citizenship status. Using Microsoft’s ubiquitous (and cheap) Visual Studio tools and ASP.NET developer and database platforms, EDAPS first built the IPRS connections between the National Registration Bureau’s ID card database and the MIRP’s passport and Aliens registries. In 2010 they began to incorporate new data from the birth and death registries managed by the Department of Civil Registration, and then, the following year, they built two-way links between the IPRS and the databases maintained by the two (newly established) credit reference bureaus (CRBs). This relationship allowed the CRB’s to do real time confirmation of the identity of the new applicants for credit (by doing automated queries against the linked civil registration and ID card records). Much more importantly for the broader political-economy in Kenya, it also pushed blacklisting data – including the unique identifiers from borrowers’ SIM cards – into the IPRS. Finally, in 2013 EDAPS developed a live-capture biometrics platform, and a custom workstation, to speed up the issuing of ID cards and bolster the integrity of the entire identification chain. Critically, the listing inside the state’s IPRS of defaults – what CISKenya would describe as negative information – provided a simple, effective and rapid sorting and coercive tool for the new mobile credit providers, especially Safaricom’s very rapidly growing M-Shwari product, looking for instant decision-making systems. This simple link had the effect of separating Safaricom, with its troves of data on millions of users’ spending behaviour, from the broader alliance of formal lenders who were looking to build database profiles that would differentiate customers based on sharing positive (payments) and negative (defaults) information.

* who was Gatabaki

Mwende Gatabaki was chosen as the architect of the new plan for identification and information sharing precisely because she was not involved in any of these conflicts or controversies. She was invited to join the office of the president from the job from the African Development Bank in Tunis after the publicity generated by an award for ICT Woman of the Year in December 2013. She was an outsider, not associated with the bureaucracy, with Safaricom or the Kenyan banks, or with the credit information sharing effort. But she had extensive experience working on the networking demands of the cumbersome Kenyan parastatals and the large donor organisations in East Africa. “The decision to get an expert from outside the public service to lead the process,” as the *Sunday Nation* explained in June 2014, was “informed by the failure of past attempts mainly due to corrupt political and business interests.”

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21 Joan Barsulai, “In ICT, She’s Miss Fix-It,” *The Standard*, April 23, 2011,
* Why was this project being pushed?

None of this background – the difficult history of ID tenders, the comparative success of the IPRS, or her reputation as a successful manager – answers the important question of why the NDRS was being proposed at all. Here the answer, as ever, lies in a matrix of imperatives some more genuinely felt than others. The national security pressure in Kenya in early 2014 was certainly intense, and perhaps the most compelling general reason for a turn to universal biometric identity registration. The Kenyan military, and police, nor their US allies did not, however, provide the $100 million that the exercise would require. Similarly, few would deny the cost and inefficiency of the current bureaucracy or the likelihood that more capacious networked communications and database-integration, not to speak of reliable public on-line access, would significantly improve the lot of ordinary Kenyans looking to secure basic documentation, education or health-care. All of these were important justifications for the scheme, but the real motivation lay with the informational requirements of the banks, and in exchange they were expected to fund it. The state could afford to put just $10 million into the entire project. The rest – as Gatabaki and others repeatedly explained – was “to be recovered through data vending to key institutions, especially those in financial services.”

Here the idea was to draw on the resources of the “Association of Kenya Credit Providers who will be anchor clients” of the biometric identification database and the new asset registry. “I am sure,” Gatabaki said in October 2014, “we will raise at least Sh25 billion [$250 million] from this service in addition to the other benefits it comes with.”

[To be continued!]