

The Sustainable Development Goals and ‘legal identity for all’: ‘first, do no harm’

Bronwen Manby¹

Draft accepted for publication by World Development 30 November 2020

Introduction

In 2007, Simon Szreter, writing in this journal, urged attention by the development community to the human right to an identity, specifically ‘the right to have one’s legal identity and relationship to significant others publicly recognized, securely registered, and accessible for personal use’ (Szreter, 2007, p. 67). Considering the establishment of a national identity system through parish registers in 16th century England, he argued that: ‘The possession and use by citizens (not the central state) of an identity registration system was an information resource of great value to the individuals of the first society in the world to achieve economic development’ (Szreter, 2007, p. 72), and thus analogous systems would have significance for contemporary economic development in other states.

In September 2015, the United Nations (UN) General Assembly endorsed this view of the importance of registration and identification for economic development. The Sustainable Development Goals (SDGs), painstakingly elaborated by the combined mass of global development actors, established the target that states should, by 2030, ‘provide legal identity for all, including birth registration’. The foundational significance of this target, Target 16.9, was emphasised by its allocation to Goal 16, which has the overarching ambition to ‘Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels’ (*SDG 16*, 2015). The indicator adopted to show progress towards the target was the percentage of children under five whose birth is registered.

Target 16.9 was one of the least controversial to adopt, with those involved reporting little discussion of the target during the negotiations surrounding the SDGs. But since the adoption of the SDG target those seeking to implement it have been struggling to define what it means: ‘legal identity’ was not a term that had any pre-existing definition in international law.

It seems that different agencies and interest groups are interpreting the SDG target on legal identity according to their own priorities, whether they be child protection, national planning, economic development, social protection systems, public health, national security, consolidation of national identity, the ending of statelessness, or, indeed, rent-seeking by those responsible for contracting new systems. Among the interest groups are the multinational companies with capabilities in new digital and biometric technologies involved in the provision of identity documents.

¹ Senior policy fellow and guest teacher, London School of Economics and Political Science. Many thanks to Simon Szreter, Alan Gelb, Jaap van der Straaten, Mia Harbitz, Keith Breckenridge, Edgar Whitley, the World Bank ID4D team, and two anonymous reviewers, for their very valuable comments on drafts of this article.

This article will reemphasise the importance of the discussions of legal identity, which now increasingly take the form of discussions of *digital* identity, for scholars of world development. It will do so with particular reference to the challenges of ‘providing legal identity’ in Africa. Identification systems across Africa are rapidly being upgraded. Governments are increasingly linking access to services such as health and education to possession of a government-issued centralised form of identification. There are major efforts to improve birth registration, and civil registration more generally, sponsored by UN agencies working with the African Union (APAI-CRVS, n.d.). National identity cards have been introduced where they did not previously exist, or converted to biometric versions where they did.

There is, as a consequence, now a great deal of practitioner literature surrounding the concept of ‘legal identity’; the World Bank has even established a programme on ‘identification for development’. The ‘international blind spot’ (Sreter, 2007, p. 68) for the significance of the right to an identity has been comprehensively filled. The scholarly literature remains relatively limited – though rapidly growing.

Too often overlooked is this literature is one of the central points of Simon Sreter's article: that the system of identity registration that facilitated economic development in England was centred on the needs of individuals rather than those of the state. This article also adds another angle. In the 16th century, the question of whether a person living in England was or was not a subject of the English monarch was rarely if ever in dispute, and not recorded in the parish registers that provided the first identification system. In today’s globalised world, however, distinctions among those with legal status as citizens, legal residents, irregular migrants, refugees, or stateless persons, are ever more important to the ability to enjoy other rights. States strongly resist infringement on their sovereign discretion to decide these categories and to record them in the new or upgraded identification systems. International development agencies supporting identification initiatives, including the World Bank, are hesitant to challenge this discretion, thanks to the limitations of their mandates; but the consequences of not dealing with them at the early stages of introduction of new identification systems may mean rather the sharpening of existing inequalities than the social inclusion being promoted as their nominal objective. There is a delicate balancing act in strengthening state capacity, while ensuring sufficient safeguards.

(Legal) identity in international human rights law

As Simon Sreter noted, the right to an identity is long-established in the international human rights regime, and this right has received greater attention since he wrote. The 1948 Universal Declaration of Human Rights (UDHR), the 1966 International Covenant on Civil and Political Rights (ICCPR), and a range of other international human rights treaties establish that every person has the right to recognition as a person before the law, enabling that person to assert rights, to enforce contracts, or to assert or defend a case in court.

The 1989 Convention on the Rights of the Child (CRC) — by which every state in the world except the United States has agreed to be bound — includes two articles that deal directly with the issues. Article 7, like Article 24 of the ICCPR, provides for every child to have the right to a name, to be registered immediately after birth and to acquire a nationality. A number of other UN and regional treaties have similar commitments, emphasising especially birth registration and the right to a nationality (the term more often used in international law, where it is a synonym for citizenship). Universal birth registration, ‘the continuous,

permanent, compulsory and universal recording within the civil registry of the occurrence and characteristics of birth, in accordance with the national legal requirements', is already a long-standing objective of UNICEF and other agencies concerned with child welfare (UNICEF, 2002). Birth registration may be essential for the protection of many rights; and it provides critical evidence of the main facts determining the nationality of the child (UNICEF, 2013; UN Human Rights Council, 2014).

Article 8 of the CRC, the product of advocacy efforts by the newly democratic Argentinian government in the wake of forced adoptions during the military dictatorship (Arditti, 1999), introduces the overarching concept of 'identity', establishing the child's right 'to preserve his or her identity, including nationality, name and family relations as recognized by law' and places an obligation on states to re-establish identity if 'a child is illegally deprived of some or all of the elements of his or her identity'. The CRC establishes the content of 'identity' through an open rather than closed list, allowing for other elements to be included beyond name, nationality, and family relations, as appropriate in the context (Doek, 2006).

The right to recognition as a person before the law established in international human rights treaties is freestanding, and not dependent on official identification. Similarly, the right to identity in the CRC is stated separately from the right to birth registration. However, it has for a long time also been clear that without official recognition and registration of identity a person's rights may be significantly curtailed in practice. The SDG target to 'provide legal identity' is therefore best understood as an objective to *enable proof of* legal identity.

Legal identity and development

Birth registration, and civil registration of life events generally, has two functions: the legal function emphasised by the human rights framework, and as a source of statistics. From 1955, the first version of the UN Handbook of Vital Statistics Methods emphasised the primary value of civil registration as legal, and only secondarily as a source of statistics, especially in poorer countries where surveys are more practical tools (UN Statistical Office, 1955, p. 5; see also UN Statistics Division, 1998, para. 74). Nevertheless, the statistics aspect of civil registration generally gained more attention (for states where coverage was nearly complete), considered 'vital for policy making and for monitoring, generating statistics for policy formulation, planning and implementation, and monitoring of population dynamics and health indicators on a continuous basis' (UN Independent Expert Advisory Group on a Data Revolution for Sustainable Development, 2014, p. 19), and as a key tool in shaping public health interventions (The Lancet, 2007, 2015). There is extensive international guidance on the development and management of civil registration and vital statistics (CRVS) systems (most authoritatively, UN Statistics Division, 2014). The legal identity element of a CRVS system, however, has been relatively neglected (Harbitz, 2013).

With the adoption of the SDG target, recognition of the importance of officially recognised 'legal identity' is now everywhere in the development policy literature. Without proof of legal identity, in the form of an official entry in a state register and (usually) a document issued as evidence of that entry, people are invisible to the state and other agencies that are working to fulfil the different goals and monitor their implementation (Stuart et al., 2015). Those without proof of legal identity, predominantly the poor and disproportionately women, are excluded from the formal economy (Desai et al., 2018). Effective identification systems are needed to support many other SDG targets, including access to finance and social protection systems (Target 1.3), as well as health and education (Goals 3 and 4); for

the poor to have control over land and other assets (Target 1.4); and to measure progress against many of the targets under Goals 3, 4 and Goal 5 on health, education and gender equality (Dahan & Gelb, 2015; Gelb & Diofasi Metz, 2018). Proof of legal identity is essential to ‘facilitate orderly, safe, regular and responsible migration and mobility of people’ (Target 10.7 under the goal to reduce inequalities within and between countries) (Long et al., 2017).

There is scholarly agreement that undocumented nationals often face significant exclusion (Bhabha, 2011; Hunter, 2019). There is also evidence that expansion of social protection has increased the demand for and supply of identity documentation – and more rapidly than coercive measures (Breckenridge, 2014; Hunter & Brill, 2016; Gardner et al., 2017; Harbers, 2020; van der Straaten & Metz, 2019). Nonetheless, some argue that evidence of the broader development benefits of strengthened identification systems is inconclusive in practice, although ‘perhaps most clearly established in the realm of antipoverty cash-transfers’, making it challenging to balance the benefits and risks of new investments (Brewer et al., 2015, p. 7). Debra Ladner and colleagues, researching the question ‘does delivering legal identity improve the delivery of its associated social goods’, conclude that, ‘[i]n countries characterized by poor governance, weak institutions, and resource constraints, legal identity may make little practical difference without complementary reforms’ (Ladner et al., 2014, p. 73). In this, identification is like other efforts to strengthen state capacity: improvement of service delivery requires not just infrastructure of various types, but also the political will and systems of accountability to make it work effectively.

Presentations of current identification initiatives in Africa often seem to claim that better identification will by itself facilitate access to social goods. The roll-out of digital ID in Benin is described as ensuring efficient delivery of social services, especially through reduction in fraud (Adjovi, 2019). Lesotho’s national identity and civil registry is said to enable civic and social empowerment, as well as to ‘make possible real and inclusive economic gains’ (Raboletsi, 2019). In Nigeria, it is asserted that ‘A well-developed digital identification program will help deliver the [government’s] development agenda, and provide for key government services, such as safety net, financial inclusion, security and agriculture.’ (Aziz, 2019). In Kenya, the World Bank supported the government’s decision to roll out a national biometric registration exercise, as the foundation of an ‘inclusive growth agenda ... including better targeting of subsidies to small-scale farmers, government social protection programs, and e-medical services among several others’ (World Bank, 2019c). In Côte d’Ivoire, a new biometric national population register will, it is claimed, enhance child protection, public security, socio-economic planning, democracy, financial inclusion, and good governance generally (Diakalidia, 2019). A similar list is provided for Tanzania (Malibiche, 2018).

For these benefits to be realised, however, there is need for greater clarity on what exactly it is that is being delivered through these programmes, and how they relate to the successful fulfilment of other state obligations.

Legal identity (un)defined

By contrast to the human rights framework on identity and birth registration for children, and the established protocols on civil registration more generally, there is no international legal framework governing the right to an identity or to be issued official documentation later in life.

SDG Target 16.9 neither defines ‘legal identity’ nor proposes any indicator to measure progress other than the coverage of birth registration among those under five years old. Submissions around the indicators focused on the age setting the limit at which coverage of birth registration should be measured (*Metadata for Goal 16*, 2016). The indicator adopted leaves significant uncertainty on what it would take to know that the target had been reached, especially in its broader definition beyond birth registration (van der Straaten, 2015).

The problem of definition starts from the distinction that can be made between identity and identification. An identity is conventionally what a person (or thing) is, in and of itself; a legal identity is the recognition of that identity in law; and identification is the process of establishing that identity and distinguishing the person (or thing) identified from others; which may then be recorded in a register and confirmed by the issuance of a credential of some form – such as an identity document – as proof of the registration. The confusion has led even commercial operators in this space to propose a ‘style guide’ for the use of terminology (Donner, 2018). A person’s ‘legal identity’, an identity they have in law, should be separated from the question of whether they have been formally identified and registered by state authorities and issued a document confirming that registration.

Moreover, a person may have multiple legal statuses – or ‘identities’ – in relation to the state, with corresponding entries in official registers and different rights and obligations according to context: as a pensioner, a school-age child, a single or married person, a recipient of state benefits, a voter, an adult due to perform military service, an owner of property, etc. (Brewer et al., 2015). There is no particular requirement that each register be linked within a single national system, and in many states they are not, even as there are procedures to check that multiple registrations can be traced back to a single person.

National legal frameworks and institutions for civil registration vary widely: not just between the civil and common law traditions, but with distinctive characteristics in Islamic societies, (formerly) communist states, states that have sought to formalise recognition of customary law, or those where registration is rather at the family or household level. The legal identity field is vastly complicated by these variations, especially as they relate to the recognition of documents issued by foreign governments. As more and more children are born and become adults in a country where neither parent is recognised as a citizen (both in law and in fact), the preservation of the different aspects of their ‘identity, including nationality, name and family relations as recognized by law’ (CRC, Article 8), becomes ever more fragile. These challenges are greatest for refugees and irregular migrants, but have proved difficult to resolve even within the European Union, with the presumption of legal residence that follows from citizenship of another member state (Manby, 2020).

The SDG Target did not attempt to address any of these complexities. Instead, the content of the commitment was left vague, beyond birth registration alone. Different actors have chosen to interpret it in light of their own priorities.

Legal identity and digital identity

The rapid advance of digital technology has created a surge in discussion of the concept of ‘digital identity’ disconnected from the traditional concepts of civil registration. The digital identity possibilities range from the conceptually straightforward digitalisation of paper records; via the addition of biometric identifiers to these registers; to the concept of ‘self-sovereign’ or ‘self-managed’ identity free from reliance on a government database; or the

management of the ‘digital exhaust’ that we all emit by using the services provided by Facebook, Google and other online platforms (Gelb & Clark, 2013; Neef, 2015; USAID, 2017; Zuboff, 2019). For this article, however, I restrict myself to digital forms of government-backed identity documents or other credentials: this is the way that the term is used by the World Bank and UN agencies in their policy discussions (World Bank, 2018c). Nonetheless, the boundaries between ‘digital’ and ‘legal’ identity are blurry.

The World Bank’s 2016 *World Development Report* (WDR), which focused on the development benefits from digital technologies, recommended that the best way to achieve the SDG legal identity target was ‘through digital identity systems, central registries storing personal data in digital form and credentials that rely on digital, rather than physical, mechanisms to authenticate the identity of their holder’ (Atick et al., 2016). The Bank argued that digital forms of official identity can increase access to both public and private services where civil registration is weak, or help to reduce some forms of corruption, such as double-dipping for entitlements or ghost workers in public employment. The increased availability of affordable technology to capture biometric details provides new ways to authenticate identity and helps to ensure uniqueness, creating much stronger levels of certainty that the person holding a document is the person to whom it was issued, or removing the need for a document altogether. Although the WDR also emphasised the importance of strengthening the ‘analog foundations of the digital revolution’ (World Bank, 2016, p. 2), and the Bank has provided important support to the strengthening of existing civil registration systems, it was suggested that low-income countries could also ‘leapfrog’ the paper-based stage, and move straight to digital identification (Gelb & Clark, 2013, pp. 3, 46; World Bank, 2016, p. 154). Of course, no modern civil registration or identification system could remain wholly paper-based; but the way in which digitalisation is conceptualised is important.

A distinction is increasingly made between foundational and functional identity systems: a foundational identity is a system ‘primarily created to manage identity information for the general population and provide credentials that serve as proof of identity for a wide variety of public and private sector transactions and services’ (World Bank, n.d.; first proposed in Gelb & Clark, 2013). This foundational system is then drawn upon for various public ‘functional’ identities, such as registers for drivers’ licences, civil service employees, pensions, or public health insurance; as well as private sector applications such as SIM card registration and bank accounts. A model the Bank has supported for new digital identity systems in countries with low existing rates of official registration is the creation of a ‘foundational’ identity layer for all adults resident in the country without distinction, comprising a national identity number issued on the basis of biometric identification, leaving questions of legal status for later decision – as proposed for example in the project ‘West Africa Unique Identification for Regional Integration and Inclusion’ (WURI) (World Bank, 2018e, 2020).

This approach draws heavily on the ‘Aadhaar’ biometric registration and identity number developed in India, where the ‘foundational’ layer (‘aadhaar’ means ‘foundation’) is not linked to legal status in the country: the only criteria for enrolment are residence in India and provision of biometric identifiers (Raghavan et al., 2019). The view is that the simple ability to prove who you are, and that you are the same person on the next interaction with the authority concerned, has benefits both for the person concerned who was previously unable to participate in the formal economy; and for the state, which can reduce fraud and

corruption, and benefit from the tax generated by wider inclusion in the formal economy. Each government agency can separately determine the person's eligibility for any particular status, including citizenship; but the initial identification process does not need to do so (World Bank, 2016, 2019b). The approach provides a short cut to proof of identity, seeking to sidestep – or at least delay – difficult questions around determination of eligibility for citizenship that held back the creation of a national identity card in India for many years (Sen, 2019). User satisfaction with the Aadhaar system is generally high (*State of Aadhaar: A People's Perspective*, 2019)

The Bank has supported a number of mass biometric enrolment efforts for adults into newly established or upgraded national population registers, rooted in the desire to enable comprehensive access to identification for the 'stock' of all adult residents of a country, without waiting for the 'flow' of birth registration to populate a register (World Bank, 2019a, p. 8), drawing on this example. In general, however, the Aadhaar approach has not been replicated. Although Nigeria and the WURI states (Côte d'Ivoire and Guinea, in the first phase) are enrolling residents and issuing identity numbers based on biometric data, the legislative foundation remains the usual national identity card model, establishing a register that records legal status as citizen or non-citizen – but without any procedure to resolve the status of those with no existing documents. This has caused some confusion: in Nigeria there has been an official denial that the national identity card was being substituted by biometric registration only (Centre for Democracy and Development, 2020); but in other fora the decoupling has been affirmed (ID4Africa, 2020). The WURI project also supports the strengthening of national legal and institutional frameworks, including new laws for data protection where none existed (World Bank, 2018f, p. 36). In Togo, one of the second phase countries for WURI, a new law was adopted in September 2020 that provided for a new biometric database of residents to be the foundation of all identification purposes, integrating provisions on data protection (Assemblée Nationale du Togo, 2020). Unlike national identity card laws, the Togolese legislation proposes no record of nationality; like them, it has no formal link to the civil registration system, but at the same time it proposes capturing some of the same data (date and place of birth, names of parents).

The rest of the UN system has pushed back against delinking the SDG 'legal identity' target from civil registration. An inter-agency expert working group was established in 2018 to discuss the issues, leading to the adoption of an agreed definition that underlines both the significance of the concept and the difficulty of tying down what it should encompass in simple terms (UN Legal Identity Expert Group, 2019; UN Economic and Social Council, 2019):

Legal identity is defined as the basic characteristics of an individual's identity. e.g. name, sex, place and date of birth conferred through registration and the issuance of a certificate by an authorized civil registration authority following the occurrence of birth. In the absence of birth registration, legal identity may be conferred by a legally-recognized identification authority. This system should be linked to the civil registration system to ensure a holistic approach to legal identity from birth to death. Legal identity is retired by the issuance of a death certificate by the civil registration authority upon registration of death.

The importance of this different approach is that while civil registration, in particular birth registration, does not (usually) record nationality or legal status in a country, or guarantee that either can be secured, it does record the information on the basis of which nationality,

and many other rights, are based (Setel et al., 2007; AbouZahr et al., 2015). There is also a large amount of accumulated experience and guidance in relation to the legal and institutional frameworks for such systems. The ‘foundation’ civil registration creates for a person’s legal identity is thus stronger (or ‘thicker’) than an approach that collects biometric and other data but does not link to a civil registry. Civil registration is critical to legal status, especially for rights based on family connections: this applies both in countries where nationality is attributed based on birth in the territory, and in those where legally recognised descent from a citizen (or a person resident in the country at a certain date) is the rule (Manby, 2020).

The Janus-faced nature of identification systems

The recognition by international human rights law of the right to identity highlights the centrality of official recognition to the assertion of rights and obligations. The development literature focuses rather on the importance of registration programmes for planning and economic empowerment. Scholars of the history of registration and identification have recognised both these sets of claims, but they also emphasize the potential for registers of people and property to make negative as well as positive contributions; to empower authoritarian regimes as well as enable civic and commercial society.

In a ground-breaking volume published in 2001, Jane Caplan and John Torpey argued that ‘the history of identity documentation is integral to an understanding of the expanding of state and police practices that have constituted the modern bureaucratic and welfare state’ (Caplan & Torpey, 2001, p. 12). This collection has been followed by several others. In 2008, Colin Bennett and David Lyon edited a set of contributions examining the role of national identity cards and the increasing securitisation of identity (Bennett & Lyon, 2008). Simon Szreter joined with Keith Breckenridge to publish an edited volume examining state registration procedures as official ‘recognition’, moving beyond a focus on registration systems for policing, border control and surveillance, or on vital statistics and the generation of demographic data, to show that identity registration has been a necessary ‘infrastructure’ of all functioning societies, not only the ‘modern’ world. They urged that ‘[t]he subject of registration itself needs to be “registered” in the academic world’ (Szreter & Breckenridge, 2012, p. 30). Explicitly building on Caplan and Torpey’s volume, Ilse About, James Brown and Gayle Lonergan collated a set of contributions on the history of identification practices in 2013, highlighting the processes of identification as well as the final outcomes, and the increasing takeover by corporations rather than the state (About et al., 2013). A project on the ‘social life of identity documents in Africa’ coordinated by Richard Banégas and Séverine Awenengo Dalberto seeks to question the ‘democratic illusion of the universalisation of rights through technology’ and the risks of criminalising of those without documents, within the neo-colonial marketisation of state identification systems (Dalberto et al., 2018, p. 6).

Foundational theorists for this scholarship are Max Weber, describing an inevitable pairing of increased democracy with increased bureaucracy (discussed in Caplan & Torpey, 2001, p. 5), and Michel Foucault’s thoughts on the birth of biopolitics, and the ‘endeavour, begun in the eighteenth century, to rationalize the problems presented to governmental practice by the phenomena characteristic of a group of living human beings constituted as a population’ (Foucault, 1997, p. 73). More recently, James C. Scott coined the concept of ‘legibility as a central problem in statecraft’, that in some circumstances can lead to disaster (Scott, 1998, pp. 2, 4). Both Weber and Scott emphasise the importance of checks and balances, the role

of civil society, an autonomous judiciary, and democracy itself, if ‘certain schemes to improve the human condition’ (as Scott described them) based on registration and categorisation are not to fail.

The nature of the state and the quality of its institutions determine these outcomes. Registration and identification can obviously function either as an instrument of oppression, up to and including genocide, as it did for the Nazi government of Germany or the Rwandan government in 1994 (Caplan, 2013; Longman, 2001; Piton, 2019); or as an instrument to promote and monitor the realisation of equal rights, as in the post-apartheid government’s repurposing of the registration of ‘natives’ in order to expand access to welfare benefits in South Africa (Breckenridge, 2014). Statistics collected for one purpose can also be used for another, whether with benign or malign intent (Engerman, 2012). It all depends on the institutional context and political orientation of the government and society concerned. Individual registration, rather than social aggregates, can also mark the distinction between a colonial government interested in categories only, and a government more interested in promoting equality of opportunity (Cooper, 2012; Gopinath, 2012).

Legal identity, national security and border control

It is not surprising that many governments have moved swiftly beyond the development or human rights aspects of ‘legal identity’, to highlight instead the primary importance of national security and border control in implementing the new identification systems. The new technologies of biometric identification are particularly seductive from this perspective.

In Kenya, for example, from 2018 the Ministry of the Interior began to implement a new biometric National Integrated Identity Management System (NIIMS), known as the Huduma Namba (service number), to supplement the existing national identity card. The need for the new registration system, intended to provide a ‘single source of truth’ for all personal data (a term derived from information systems design), was justified partly on the grounds of facilitating service delivery, but in large part by national security (Government of Kenya, Ministry of Interior and Coordination of National Government, n.d., 2019; Mugo, 2019). An effort in Nigeria to harmonize multiple identity registers into a single biometric database under the National Identity Management Commission (NIMC), also invoked the need to ‘increase security and help fight organized crimes and other illegal activities such as human trafficking, migrant smuggling and fraudulent documents’ (Ibrahim, 2017); the ‘critical need’ for the establishment of an integrated DNA database was also asserted (Government of Nigeria, 2020). Similarly, the contract issued to the biometric company Morpho for the new nationality identity card rolled out in Mauritania from 2011, aimed to combine ‘civil, police and border-control applications... making it possible to search the civil databases to check the identity of people registered in the criminal AFIS [automatic fingerprint identification] system’ (ter Hennepe, 2012). Virtually every country in Africa rolling out a new identification system has a similar statement.

This emphasis on security and border control is of course not only from the perspective of ‘developing countries’. The European Commission specifically proposes ‘strengthening third countries’ capacity to ensure functioning civil registries and fingerprint or biometrics digitalisation; not (only) for the purposes of service delivery, but as a means to ‘ensure that third countries fulfil their obligations to readmit their nationals’ (European Commission, 2016). Wealthy states ensured that language on legal identity in the original draft of the

Global Compact on Migration adopted in 2018 was adjusted to reduce the focus on rights and increase the focus on control (de Chickera, 2018).

Legal identity and rent-seeking

Leaving the rhetoric of development, rights, or national security aside, a central feature of many of the new identification projects appears in practice to be rent-seeking.

The sudden availability of biometric technology has created a supply-driven push for the latest technology to solve the challenges of weak identification systems. The technology companies describe themselves as ‘solution providers’, and have taken the SDG legal identity target as an endorsement of their own products (see, for example, Lee, 2015; Bouverot, 2016; Gemalto, 2019). Safran-Morpho, the supplier for a biometric voter registration system in Côte d’Ivoire, even claimed – in the face of reports of more than 1,000 deaths immediately before and after the 2010 elections – that the new biometric voters’ register had ended the civil war (Safran-Morpho, 2014). The language of technological fix is pervasive.

The World Bank emphasises the potential savings and revenue from efficient identification systems (Clark, 2018; World Bank, 2018d); a report by McKinsey on digital identification similarly argued that ‘Digital ID can lead to significant reductions in direct costs and improved efficiency for both private and public institutions’ (White et al., 2019).

While savings have clearly been made in some contexts, the new identification systems have greatly increased up-front costs, for uncertain long-term benefits. In the more-studied field of electoral registration, the cost of elections has dramatically escalated in those countries that have invested in a biometric voters’ roll (Cheeseman et al., 2018; Debos, 2018; van der Straaten, 2019), although it is argued that in the right conditions the expected gain could exceed the cost (Gelb & Diofasi, 2016). There are also registration systems where the entire project has been abandoned: an early effort to create a digital national identity card in Nigeria left the data of sixty million Nigerians in the hands of the French company Sagem, for no national benefit (Manby, 2018a, p. 255). A later iteration of the Nigerian effort was supported by Mastercard, providing a financial services company with preferential access to large numbers of people who were legally obliged to enrol in the register (Mann, 2018). A survey of African identity authorities in 2018 thus reported that ‘vendor lock-in is the biggest cause of dissatisfaction with technology vendors’ (Burt, 2018); that is, proprietary software prevents a government from changing supplier, leading to ever higher costs. South Africa’s former statistician-general has accused Africa’s leaders of slumbering while ‘the paucity of systems thinking in Africa is mortgaging the continent holus bolus to the owners of digital capital’; and warned ‘about the sins of technology and money, which potentially would leave those technologically deficient behind’, so that value created by Africa is appropriated by others (Lehohla, 2018, 2019).

There are efforts to prevent the more egregious examples of price gouging and unnecessary reinventions of the wheel. The Modular Open Source Identity Platform (MOSIP), supported by the Gates, Omidyar and Tata foundations, aims at reducing costs by creating an ‘open source’ platform avoiding proprietary software (Jain, 2019). The ‘Open CRVS’ initiative developed by Plan International and partners offers an open-source digital civil registration system that is designed to be easy to customise and operate without great technical expertise, in environments where other resources -- such as connectivity -- may also be

limited (*Open CRVS*, n.d.). In response to these initiatives, the Secure Identity Alliance, a group of biotech companies, launched their own ‘open standards’ initiative to facilitate interoperability of private sector software (Secure Identity Alliance, 2019). The World Bank has supported MOSIP implementation in pilot countries, and also produced guidance on procurement and other standards. But contracts for identity systems continue to be signed between governments and technology suppliers, with minimal public understanding or oversight of the terms and payments made, creating significant risks of corruption (which would remain with an open source platform). There is often an insufficient national legal framework to create accountability for the accuracy and fairness of the systems as they function in practice. There is equally no agreed international legal framework governing these powerful new technologies, leaving the providers of new identification systems largely unsupervised.

Legal identity and data protection

In practice, African states are often rolling out biometric registration systems before data protection and privacy laws are in effect, leaving control over that data almost entirely with the biotech companies and the state (Privacy International, 2020b). Even where they are in place, data protection authorities are poorly resourced and understanding of the issues very low among national decision-makers (ID4Africa, 2019). Others have warned of ‘surveillance humanitarianism’, whereby data collection systems deployed by aid organizations inadvertently increase the vulnerability of people in urgent need (Latonero, 2019; see also Hayes, 2017; Latonero, 2018), and deplored the fact that poor countries are the site for experimentation with identification systems in the absence of any control by the users (Currión, 2015; Schoemaker et al., 2018). Concepts of ‘informed consent’ central to the ethical collection of data may be meaningless if registration in a scheme is compulsory to obtain the benefits promised (Kak, 2020).

Rwanda enrolled more than nine million people into its national identity system (over one weekend), linked multiple government departments and agencies into the database -- and sold the data to the private sector – all without any data protection act in place (Atick, 2016). Zimbabwe was reported to have sold its citizens’ biometric data to China, to train facial recognition on African faces, without any consent from those involved (Hawkins, 2018). Kenya rolled out its Huduma Namba project with no data protection law enacted, no broader legal framework, and no parliamentary or public consultation on the issues. In January 2020, the High Court in Nairobi ordered implementation of NIIMS to halt until the time that a comprehensive regulatory framework was put in place (Privacy International, 2020a; Sinha, 2020); but later in the year civil society was again condemning the government’s decision to proceed without addressing the discriminatory implementation of the law (Nubian Rights Forum et al., 2020). A new biometric ID card was rolled out in Tanzania without any data protection law in place, and SIM cards switched off if their owners could not prove enrolment in the new national identity system, increasing already substantial threats to free expression from a government (like Rwanda’s) with strong authoritarian tendencies (Article 19, 2020; Lichtenstein, 2020).

More broadly, commentators have warned that the World Bank and other development actors who have supported the roll-out of digital identity projects have failed to understand ‘the complex relationships between asymmetric information and power in contexts of a weak rule of law’ (Khan & Roy, 2019). Despite the limited data collected, the Aadhaar

biometric identification in India also raises the question that ‘without adequate institutional safeguards and well-established democratic practices, such a system can result in a greater concentration of power in the hands of a government, allowing scope for misuse’ (Sen, 2019). As the drive to reduce fraud, impersonation, and costs increasingly requires that a person has a single digital identity and use only this identity to transact with government, the stakes become higher: in relation to a person’s existence on the register, the accuracy of the information recorded, its protection from misuse, and the means by which problems can be challenged and corrected (Sullivan, 2016, 2018). Thus, it is argued that the government’s role should rather be ‘identity assurance’ than ‘identity management’ (Whitley, 2018, pp. 23, 46–49).

There have been important efforts to pay attention to these issues. The Good ID initiative ('a multi-sector coalition of privacy and security champions' supported by the Omidyar Foundation), proposes 'an approach to identity management that prioritizes data privacy and security' (*Good ID Explained*, n.d., see also Madhukar, 2019). A group of international development actors developed the Principles for Digital Development, considering the application of digital technologies to development programs (Waugaman, 2016). The World Bank Identification for Development Initiative has developed an extensive range of tools and resources for assessing whether there is an 'enabling environment' for its support to be given to the development of a national identity programme, including a focus on the gaps in the legal framework around data protection and privacy (World Bank, 2018a, 2018b). The Bank also led a process to adopt ten 'Principles on identification for Sustainable Development', endorsed by other UN and development agencies, philanthropic foundations, and private sector actors including the biotech companies, organised under three broad headings: inclusion (universal coverage and accessibility); design (robust, secure, responsive, and sustainable); and governance (building trust by protecting privacy and user rights) (World Bank, 2018c).

Legal identity and discrimination: a bug or a feature?

The first principle of the Principles on Identification for Sustainable Development is that there should be 'universal coverage for individuals from birth to death, free from discrimination'. Hence:

Legal identification should be provided to all residents—not just citizens—from birth to death set out in international law and conventions and their own legislative frameworks. This includes the commitment to universal birth registration for those born on national territory, which is an essential part of identity management.

Legal, procedural, and social barriers to enroll in and use identification systems should be identified and mitigated, with special attention to poor people and groups who may be at risk of exclusion for cultural, political or other reasons (such as women, children, rural populations, ethnic minorities, linguistic and religious groups, migrants, the forcibly displaced, and stateless persons). Furthermore, identification systems and identity data should not be used as a tool for discrimination or infringe on individual or collective rights.

These are good principles, aimed at ensuring that the potential exclusionary impacts of identification are minimised, and also emphasising the importance of universal birth

registration. However, they do not address the fact that in most cases, identification *requires* discrimination, between those who are or are not entitled to a particular status and its related benefits. And a state-backed foundational identity register for adults will almost inevitably make distinctions based on legal status in the country, between citizens and non-citizens: a principle that that proof of legal identity should be issued to all does not avoid the task of deciding what status is recorded. Creating a two-step process (indiscriminate biometric registration, followed by allocation to a status), does not avoid the problem – even though it could in some (limited) circumstances postpone the need to resolve it. Interim statuses are likely to become permanent, trapping people in long-term marginalisation: there are stateless people around the world who have held such ‘interim’ documents over many decades.

The countries where new identity systems are expected to be of the greatest benefit are the countries where the highest percentage of the population is currently unregistered. This means that the process of enrolling all adults into a national population register requires a multitude of individual decisions as to whether a person is a citizen or not; and if not a citizen, whether they have another status entitling them to remain in the country. The problem is that there are many millions of people in the world whose citizenship status is simply not clear: a smaller number than those without identity documents (for many of whom citizenship will be uncontroversial), but still a very substantial figure. The process of clarifying this status may very well be empowering for those who fall the right side of the line; but deeply disempowering for those who fail whatever tests are imposed.

The tendency in practice is for new identification systems to reinforce existing patterns of discrimination (UN Human Rights Council, 2020). In Kenya, existing identification systems, especially the national identity card in place since before independence, have extremely well-documented existing patterns of discrimination and exclusion, denying access to certain groups whose citizenship is seen as presumptively doubtful (Manby, 2018a, Chapter 7.3). The government itself acknowledged that 10% of Huduma Namba applicants were turned away because they did not have an existing national ID or birth certificate (Mugo, 2019). Similar patterns are visible in many other countries where new identification systems have been supported with development funding. In Mauritania, the upgrading of the national identity card appeared to be part of an ongoing effort to strip black Mauritanians of citizenship, and was linked to an amendment to the nationality code to remove any rights based on birth in Mauritania and require timely birth registration as the basis for a claim to nationality. A protest movement *Touche pas à ma nationalité* accused the government of ‘biometric genocide’ (Salem, 2018). In Sudan, the introduction of a new civil registration system and national identity card following the secession of South Sudan was mobilised as an opportunity to screen those alleged to be of southern Sudanese origin and remove their right to Sudanese citizenship (Assal, 2014). In Uganda and Tanzania, the introduction of a biometric national identity card, where no such card had previously existed, where interpretation of the citizenship law was challenging (to say the least), and where birth registration rates were low, led to large numbers of applications lying undecided because of the lack of a procedure to resolve uncertain status, and subsequent exclusion from services (Manby, 2018b; Perrot & Owachi, 2018; Unwanted Witness, 2020).

Even the Indian Aadhaar system, which includes no record of legal status in India (or, rather, the only status it is proof of is that of ‘resident’), has not been successfully rolled out in regions where legal status is particularly controversial, most of all in the north-eastern state

of Assam; while less than one percent of those enrolled in Aadhaar did not already have at least one form of identity document (*State of Aadhaar 2017-18*, 2018, p. 5; *State of Aadhaar: A People's Perspective*, 2019, sec. 2.2). Indeed, it seems as though the original concept may be turned on its head: rather than providing a means to prove identity delinked from legal status in the country, the government of Narendra Modi is reported to be planning to link the Aadhaar platform to the controversial revival of a National Register of Citizens (NRC) and to refuse Aadhaar numbers to those not in the NRC (Chakravarty, 2018; Masiero, 2019).

Legal identity and the recognition of citizenship

What can be done to avoid the undesirable outcomes, and enable the envisaged positive impacts of ‘identification for development’, especially in countries where state capacity is weakest and the rule of law hardest to establish?

There are already numerous examples of better practice. Several of the former French territories in Africa have quite strong due process protections in decisions relating to the determination of nationality, most importantly the authority of a tribunal to determine who is a citizen from birth and who is not. In some jurisdictions, this includes the power to recognise nationality on the basis that a person has always been treated as a citizen in practice (is in *possession d'état de national*), a procedure that responds realistically to a context in which civil registration was and remains very incomplete (Manby, 2018a, Chapter 6). These models have already been drawn on as inspiration for the design of procedures to mitigate the extreme executive discretion that is the heritage of the former British territories – for example in Kenya, to implement new provisions in the 2010 constitution for the grant of nationality to children of unknown parents (Manby, 2018b).

We can also draw on the lessons from international support for democratic institutions, in particular for independent electoral commissions. The existence of a body named an ‘independent electoral commission’ is clearly no guarantee of genuinely free and fair elections, without considering the broader context. Yet it is not for no reason that African citizens and opposition parties have spent several decades insisting on the principle of independent election management in negotiations over new constitutions and electoral legislation. We can extend to identification systems generally the conclusion that ‘the greatest gains from digitization come in countries where the quality of democracy is higher and the electoral commission more independent’ (Cheeseman et al., 2018, p. 3; see also Piccolino, 2016).

This argument is particularly significant because voter registration cards have functioned as informal identity cards in countries where no centralised national identity card was established until recently. In Africa, these states include some of those which also have the lowest rates of birth registration, among them Democratic Republic of Congo, Ethiopia, Liberia, Malawi, Nigeria and Tanzania. When a new national identity card has been introduced, voter cards are generally not accepted as sufficient proof of an applicant’s citizenship, even if they feature as supporting documents (in a mass enrolment exercise in Malawi, a voter registration card contributed 40 points towards a total required score of 100 (Malik, 2020)). At the same time, voter registration cards are no longer accepted as identity documents for the range of purposes for which they were previously used. Even in states that have always had a national identity card, the effort to ensure that all adults are enrolled in a new system – and to insist on proof of enrolment to access services – means

that voter cards are reduced in value as identity documents. The decision on who is or is not a person entitled to identification as a citizen (a person eligible to vote) is thus taken away from the independent electoral commissions created across the continent after many years of struggle, and placed back with the executive – typically the ministry of the interior (a ministry that has a focus on national security and immigration control, rather than citizen empowerment). If identification is also disconnected from birth registration, it is removed from the domain of those whose focus is on universality, facilitating its conception as a national security project.

The effort to reduce multiple registration processes has some logic as regards costs, but there are very few constitutionally established independent identification commissions – none in any African country – with the responsibility of determining eligibility to be issued an identity document. Even where semi-autonomous agencies exist, they are appointed by governments in power and do not have the mandate backed by constitutional guarantees that is provided to the most effective electoral commissions. The best-known example of a truly independent identity commission is Peru's National Identification and Civil Status Registry (*Registro Nacional de Identificación y Estado Civil*, RENIEC), established by the 1993 constitution. RENIEC is responsible for birth registration and civil registration generally, and also for the national identity card. Significantly, from the point of view of state capacity-building, RENIEC started with the mandate to re-establish identification for adults as well as children after many records were destroyed during the Sendero Luminoso insurgency. It reached out to previously unidentified rural and indigenous communities, building up 'one of the strongest and most inclusive national identification programs in the world' (Reuben & Carbonari, 2017, p. 32; see also Harbitz & Boekle-Giuffrida, 2009).

Any discussion of the best institutional arrangements to manage these issues must also focus on the reality that in contexts where a very large percentage of people currently do not have a birth certificate or any other official identity document, alternative systems for proof of identity must be devised for initial enrolment to take place. The only way to make the formal state processes work is to tap into the parallel systems for identity verification that exist in all societies, but are most prominent where state institutions are weak and customary law and traditional authorities dominate the regulation of everyday life. These linkages create 'hybrid political orders', where engaging solely with the formal state may be insufficient to reach desired developmental outcomes (Boege et al., 2008). There is thus a 'need for a sharper rather than a more blurred analytical focus on regulatory shifts across the formal-informal divide' (Meagher, 2012, p. 1097). In the context of identification systems, we need to analyse the ways in which admission to citizenship is regulated at the granular level, as procedures have moved beyond a dichotomy between 'African traditions and Western modernities' to accommodate new societal tensions (Halisi et al., 1998, pp. 346–347). This means understanding how 'vernacular practices of identification are integrally connected to official modes and structures' (Rader, 2016, p. 192, considering identification in Somaliland).

The creation of more inclusive identification systems requires thinking carefully and in detail about regulation of the hybrid enrolment processes for national registries that commonly combine a requirement for state-issued documents with other forms of evidence. Commenting on 'vetting' procedures for issue of identity cards applied by the Kenyan government to Nubians and other communities, the African Commission on Human and Peoples' Rights found that:

[A]dopting an arbitrary measure, such as the vetting process, which has no basis in Kenyan law, is prone to abuse, and which places significant burdens on a minority ethnic group and makes them vulnerable to further marginalization is irrational and consequently unjustifiable (Nubian Community v. Kenya, 2015, para. 131).

In Kenya the vetting committees are designed as an additional layer on top of the production of official documents, applied only to some communities. But what are the grounds on which the decisions of these ‘vetting committees’ and their equivalents elsewhere may legitimately be based; what are the criteria they could apply to recognise a person without any documents as a citizen; what legal or paralegal assistance could be provided to those facing difficulties in proving their status; and what are the systems for review and appeal? A focus on this regulatory framework should be a priority for any proposal to strengthen identification systems; yet there is a lack of any international guidance on such procedures, beyond the conclusions that can be drawn from general due process principles. The Principles on Identification for Sustainable Development already support this call, by providing for ‘rapid and low-cost review by independent administrative and judicial authorities’, but they need reinforcement in detailed content and in application (a revised version of the Principles was planned for release in 2021).

The requirements go beyond questions of process, and move into the more difficult challenge of establishing certain minimum rules for the recognition of citizenship. One reason why Peru’s RENIEC can be inclusive is that Peru is among the majority of Latin American states that provide a right to citizenship based on birth in the territory. Registration of birth in Peru is thus the only step needed for Peruvian citizenship to be established. In most states, however, this is not an absolute right: registration of birth remains procedurally critical, but the record of the legal status of the parents as citizens of the state of a child’s birth or of another state is as – or more – important than the place of birth. If the parents are believed to be of foreign origin but have no documents, and their presumed states of origin do not recognise them, their children will be stateless without at least minimum rights based on birth in the territory. States fiercely guard their discretion in these matters. Yet there is sufficient guidance in international law on the right to a nationality and the obligation to reduce statelessness to insist on procedures to establish the nationality of every child, and to grant the nationality of the state of birth if no other state will do so.

Within the UN system, the UN High Commissioner for Refugees (UNHCR) launched a ten-year campaign to end statelessness in 2014, the year before the SDGs, and has adopted a series of guidelines and best practices documents interpreting state obligations to end statelessness and respect the right to a nationality (see resources at UNHCR, n.d.). The Inter-American Court on Human Rights has issued a number of important judgments on the right to a nationality (most famously, against the Dominican Republic (Feria Tinta, 2008)). The various European institutions have issued judgments and guidance protecting the right to a nationality, including a comprehensive recommendation on the nationality of children (see resources at Council of Europe, n.d.).

Africa’s human rights institutions have repeatedly condemned arbitrary refusals to recognise a person’s or group’s nationality. In cases from Côte d’Ivoire, Kenya, Mauritania, Sudan, Tanzania, Zambia, and elsewhere, they have insisted on the individual right to a fair hearing and condemned the manipulation of nationality laws to exclude political opponents

from office or to justify mass expulsions (Manby, 2016). The African Court on Human and Peoples' Rights has affirmed the right to a nationality as part of customary international law, and found that Tanzania's exclusion of court review in questions of immigration and citizenship rendered executive decisions arbitrary (Manby, 2019). Comprehensive guidance has been provided on the interpretation of states' obligations in the matter of birth registration and the right to a nationality, emphasising the importance of protections against statelessness and the creation of at least some rights to nationality based on birth in the territory, especially over multiple generations (African Committee of Experts on the Rights and Welfare of the Child, 2014).

These and other normative endeavours provide the foundation for a more robust insistence – by citizens, by parliamentarians, by civil society, by development agencies, by donors – on human rights principles during the roll-out of new identification systems. This includes especially the right to due process in determining entitlement to recognition of nationality or another legal status; but also moves to reduce various forms of discrimination in nationality administration, and recognition in at least some contexts of the right to nationality in the country of birth and long-term residence. Of course, these are highly political and politicised questions. Yet Africa's citizens are more open to the idea of rights to citizenship based on birth in the territory and a contribution to society than their politicians have been. Public opinion polling by Afrobarometer in 29 countries in 2011-13 found that almost everywhere a majority supported the grant of citizenship to the child born in the country of two foreign parents, with an average of 59 percent in favour; an average of 62 percent thought a person should have the right to become a citizen based on a contribution through living and working in the country (Afrobarometer, 2013).

It remains the case, amidst all these initiatives, that a strategy of 'state-avoidance' (Scott, 2009, pp. 30–31 and *passim*) may be desired and followed by some; notably those of deep rural or nomadic lifestyles, but also those living in urban slums who are subjected only to the coercive capacity of the state and see little of the benefits of inclusion. This strategy is increasingly impossible to adopt with any success (Scott, 2009, pp. 324–325). If it is argued that '[u]nder capitalism, the only thing worse than being exploited is not being exploited' (Denning, 2016, p. 273), we could say something similar about identification systems in a world order based on sovereign states. Even in the most repressive states, it may be the case that the only thing worse than being officially registered is not being registered. But in most states, even those of quite weak capacity, recognition and registration – as a citizen – carries significant benefits.

Conclusion: first, do no harm

It was 'the possession and use by citizens (not the central state) of an identity registration system' that was highlighted by Simon Szreter as the key factor in economic development in early modern Britain (Szreter, 2007, p. 72). Among the policy lessons he drew from this example were that investment in a system of identity registration should be conditional on a democratic constitution and robust civil society, 'an accessible, impartial, and independent system of recourse to law for the common people', and management by an autonomous institution (Szreter, 2007, p. 80). Large-scale systems of registration are also more likely to work effectively for the state if they are designed to provide an obvious benefit to the individuals registered (Szreter & Breckenridge, 2012, p. 16).

There is a jump from the observation that lack of the identity documents needed to access services creates significant social exclusion, towards advocacy for a policy that existing state identification systems need complete replacement. The experience so far with the new identification technologies supports the long-standing adage that structural problems cannot be solved by technological fixes (Johnston, 2018; Winner, 2020). The roll-out of these new systems on the basis of faith that they will in themselves increase inclusion and economic empowerment becomes the exemplar of the anti-politics machine (Ferguson, 1994). Thus, the introduction of new ‘foundational’ national identification systems for adults, without simultaneously addressing the legal and procedural framework for determination of legal status and nationality, risks making the problem of proof of legal identity worse rather than better.

Bibliography

- About, I., Brown, J., & Lonergan, G. (Eds.). (2013). *Identification and registration practices in transnational perspective: People, papers and practices*. Palgrave Macmillan.
- AbouZahr, C., de Savigny, D., Mikkelsen, L., Setel, P. W., Lozano, R., Nichols, E., Notzon, F., & Lopez, A. D. (2015). Civil registration and vital statistics: Progress in the data revolution for counting and accountability. *The Lancet*, 386, 1373–1385.
[http://dx.doi.org/10.1016/S0140-6736\(15\)60173-8](http://dx.doi.org/10.1016/S0140-6736(15)60173-8)
- Adjovi, S., Agence pour le développement numérique. (2019, June). *A Look at the Benin eID Experience*. ID4Africa Conference, Johannesburg.
<https://www.id4africakhub.org/presentations-2019>
- Africa Programme on Accelerated Improvement of Civil Registration and Vital Statistics*. (n.d.). <http://www.apai-crvs.org/>
- African Committee of Experts on the Rights and Welfare of the Child. (2014). *General Comment No. 2: Right to a name, birth registration and a nationality (Art. 6)*. African Union. <https://www.acerwc.africa/general-comments/>
- Afrobarometer. (2013). *Online data analysis tool, Round 5*. <http://afrobarometer.org/online-data-analysis/analyse-online>
- Arditti, R. (1999). *Searching for life: The grandmothers of the Plaza de Mayo and the disappeared children of Argentina*. University of California Press.
- Article 19. (2020, February 6). Tanzania: SIM card deactivation poses a significant threat to freedom of expression. *ARTICLE 19*. <https://www.article19.org/resources/tanzania-sim-card-deactivation-poses-a-significant-threat-to-freedom-of-expression/>
- Assal, M. A. M. (2014). Struggles of Citizenship in Sudan. In E. F. Isin & P. Nyers (Eds.), *Routledge Handbook of Global Citizenship Studies*. Routledge.
- Assemblée Nationale du Togo. (2020, September 3). *Adoption de la loi relative à l'identification biométrique des personnes physiques au Togo*.
<http://www.assemblee-nationale.tg/actualites/473-adoption-de-la-loi-relative-%C3%A0-l-identification-biom%C3%A9trique-des-personnes-physiques-au-togo.html>
- Atick, J. J. (2016). *The Identity Ecosystem of Rwanda: A Case Study of a Performant ID System in an African Development Context*. ID4Africa.
https://www.id4africa.com/2016/files/ID4Africa2016_The_Identity_Ecosystem_of_Rwanda_eBooklet.pdf
- Atick, J. J., Dahan, M., Gelb, A., & Harbitz, M. (2016). Spotlight on Digital Identity. In *World Development Report 2016: Digital Dividends*. World Bank.
- Aziz, A. A., NIMC Nigeria. (2019, June). *Digital Identity: The Cornerstone to Effective Service Delivery*. ID4Africa Conference, Johannesburg.
http://www.id4africa.com/2019_event/presentations/PS1/3-Aliyu-Aziz-NIMC-Nigeria.pdf
- Bennett, C. J., & Lyon, D. (Eds.). (2008). *Playing the identity card: Surveillance, security and identification in global perspective*. Routledge.
- Bhabha, J. (Ed.). (2011). *Children Without a State*. MIT Press.
- Boege, V., Brown, A., Clements, K., & Nolan, A. (2008). *On Hybrid Political Orders and Emerging States: State Formation in the Context of 'Fragility'* [Berghof Handbook for Conflict Transformation]. Berghof Research Center for Constructive Conflict Management. <https://berghof-foundation.org/library/on-hybrid-political-orders-and-emerging-states-state-formation-in-the-context-of-fragility>

- Bouverot, A. (2016, March 11). Women and their right to identity. *Biometric Update*.
<https://www.biometricupdate.com/201603/women-and-their-right-to-identity>
- Breckenridge, K. (2014). *Biometric State: The Global Politics of Identification and Surveillance in South Africa, 1850 to the Present*. Cambridge University Press.
<https://doi.org/10.1017/CBO9781139939546>
- Brewer, M., Menzies, N., & Schott, J. (2015). *Making identification systems work for the bottom 40 percent* (Just Development No. 8). World Bank.
<http://documents.worldbank.org/curated/en/774661467986277535/Making-identification-systems-work-for-the-bottom-40-percent>
- Burt, C. (2018, June 13). Vendor lock-in hindering African identity projects. *Biometric Update*. <https://www.biometricupdate.com/201806/vendor-lock-in-hindering-african-identity-projects>
- Caplan, J. (2013). 'Ausweis Bitte!' Identity and Identification in Nazi Germany. In I. About, J. Brown, & G. Lonergan (Eds.), *Identification and registration practices in transnational perspective: People, papers and practices*. Palgrave Macmillan.
- Caplan, J., & Torpey, J. (2001). Introduction. In J. Caplan & J. Torpey (Eds.), *Documenting Individual Identity: The Development of State Practices in the Modern World*. Princeton University Press.
- Centre for Democracy and Development. (2020). *CDD FACT-CHECK: Has FG Dumped the National ID Card and Replaced it with Digital Identity?*
<https://www.cddwestafrica.org/fact-check-has-fg-dumped-the-national-id-card-and-replaced-it-with-digital-identity/>
- Chakravarty, I. (2018, December 2). In Assam, merging NRC update with Aadhaar enrolment leads to fresh questions. *Scroll*. <https://scroll.in/article/902731/grey-area-assam-seeks-to-merge-nrc-claims-process-with-the-collection-of-biometric-data-for-aadhaar>
- Cheeseman, N., Lynch, G., & Willis, J. (2018). Digital dilemmas: The unintended consequences of election technology. *Democratization*, 25(8), 1397–1418.
<https://doi.org/10.1080/13510347.2018.1470165>
- Clark, J. (2018). *Public Sector Savings and Revenue from Identification Systems: Opportunities and Constraints* (Identification for Development Initiative). World Bank. <http://documents.worldbank.org/curated/en/745871522848339938/Public-Sector-Savings-and-Revenue-from-Identification-Systems-Opportunities-and-Constraints>
- Compilation of Metadata for the Proposed Global Indicators for the Review of the 2030 Agenda for Sustainable Development: Metadata for Goal 16*. (2016). Inter-agency Expert Group on SDG Indicators. <https://unstats.un.org/sdgs/iaeg-sdgs/metadata-compilation/>
- Cooper, F. (2012). Voting, Welfare and Registration: The Strange Fate of the État-Civil in French Africa, 1945–1960. In K. Breckenridge & S. Szreter (Eds.), *Registration and Recognition: Documenting the person in world history*. Published for the British Academy by Oxford University Press.
- Council of Europe. (n.d.). *Statelessness*. European Committee on Legal Co-Operation.
<https://www.coe.int/en/web/cdcj/statelessness>
- Currión, P. (2015, August 26). Eyes Wide Shut: The challenge of humanitarian biometrics. *The New Humanitarian*.

- <http://www.thenewhumanitarian.org/opinion/2015/08/26/eyes-wide-shut-challenge-humanitarian-biometrics>
- Dahan, M., & Gelb, A. (2015). *The Role of Identification in the Post-2015 Development Agenda* [Working Paper]. World Bank.
<https://openknowledge.worldbank.org/handle/10986/22513>
- Dalberto, S. A., Banégas, R., & Cutolo, A. (2018). Biomâtriser les identités ? État documentaire et citoyenneté au tournant biométrique. *Politique africaine*, 152(4), 5–29.
- de Chickera, A. (2018, November 8). GCM Commentary: Objective 4: Ensure that all migrants have proof of legal identity and adequate documentation. *Refugee Law Initiative Blog*. <https://rli.blogs.sas.ac.uk/2018/11/08/gcm-commentary-objective-4/>
- Debos, M. (2018). La biométrie électorale au Tchad: Controverses technopolitiques et imaginaires de la modernité. *Politique africaine*, 152(4), 101–120.
- Denning, M. (2016). Wageless Life. In A. Eckert (Ed.), *Global Histories of Work*. De Gruyter.
- Desai, V. T., Diofasi Metz, A., & Lu, J. (2018, April 25). The global identification challenge: Who are the 1 billion people without proof of identity? *World Bank*.
<https://blogs.worldbank.org/voices/global-identification-challenge-who-are-1-billion-people-without-proof-identity>
- Diakalidia, K., Office National d'Identification. (2019, June). *De la Maîtrise de l'identité juridique en Afrique à la résolution des problèmes de l'identification à travers le Registre National des Personnes Physiques: Cas de la Côte d'Ivoire*. ID4Africa Conference, Johannesburg.
http://www.id4africa.com/2019_event/presentations/PS1/4-Konate-DIAKALIDIA-Co%CC%82te-d%27Ivoire.pdf
- Doek, J. E. (2006). Article 8: The right to preservation of identity; Article 9: The right not to be separated from his or Her Parents. In A. Alen, J. van de Lanotte, E. Verhellen, F. Ang, E. Berghmans, & M. Verheyde (Eds.), *A Commentary on the United Nations Convention on the Rights of the Child*. Martinus Nijhoff Publishers.
<https://doi.org/10.1163/ej.9789004148642.i-32>
- Donner, J. (2018, December 19). The difference between digital identity, identification, and ID. *Medium.Com*. <https://medium.com/caribou-digital/the-difference-between-digital-identity-identification-and-id-41580bbb7563>
- Engerman, S. (2012). Monitoring the Abolition of the International Slave Trade: Slave Registration in the British Caribbean. In K. Breckenridge & S. Sreter (Eds.), *Registration and Recognition: Documenting the person in world history*. Published for the British Academy by Oxford University Press.
- European Commission. (2016). *Communication from the Commission on establishing a new Partnership Framework with third countries under the European Agenda on Migration*, COM(2016) 385. European Union. <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52016DC0385&from=EN>
- Ferguson, J. (1994). *The Anti-Politics Machine: Development, Depoliticization, and Bureaucratic Power in Lesotho*. University of Minnesota Press.
- Feria Tinta, M. (2008). The Right to Nationality and to Equal Protection: The Yean and Bosico Children Case. In *The Landmark Rulings of the Inter-American Court of Human Rights on the Rights of the Child* (pp. 209–231). Brill Nijhoff.

- Foucault, M. (1997). The Birth of Biopolitics (Naissance de la biopolitique, 1979). In P. Rabinow (Ed.), & R. Hurley (Trans.), *Ethics, Subjectivity, and Truth: The Essential Works of Michel Foucault 1954-1984, Vol.1* (pp. 73–79). The New Press.
- Gardner, C., Riungu, C., O'Brien, C., & Merttens, F. (2017). *Evaluation of the Kenya Hunger Safety Net Programme Phase 2: The legacy of HSNP Phase 2: Systems, practices and lessons learned*. Oxford Policy Management.
<https://www.opml.co.uk/files/Publications/a0013-evaluation-kenya-hunger-safety-net-programme/hsnp-legacy-systems-practices-lessons-learned.pdf?noredirect=1>
- Gelb, A., & Clark, J. (2013). *Identification for Development: The Biometrics Revolution* (Working Paper No. 315). Center for Global Development.
- Gelb, A., & Diofasi, A. (2016). *Biometric Elections in Poor Countries: Wasteful or a Worthwhile Investment?* (Working Paper No. 435). Center for Global Development.
<https://www.cgdev.org/publication/biometric-elections-poor-countries-wasteful-or-worthwhile-investment>
- Gelb, A., & Diofasi Metz, A. (2018). *Identification revolution: Can digital ID be harnessed for development?* Center for Global Development.
- Gemalto. (2019, September 20). *Legal identity for all: A proxy for inclusion*. Gemalto.
<https://www.gemalto.com/govt/inspired/legal-identity>
- Good ID Explained. (n.d.). Good ID. <https://www.good-id.org/en/about/>
- Gopinath, R. (2012). Identity Registration in India During and After the Raj. In K. Breckenridge & S. Sreter (Eds.), *Registration and Recognition: Documenting the person in world history*. Published for the British Academy by Oxford University Press.
- Government of Kenya, Ministry of Interior and Coordination of National Government. (n.d.). *About Huduma Namba*. Huduma Namba. Retrieved 24 March 2020, from <https://www.hudumanamba.go.ke/background/>
- Government of Kenya, Ministry of Interior and Coordination of National Government. (2019, March). *Huduma Namba and Our National Security Strategy*. Huduma Namba. <http://www.hudumanamba.go.ke/huduma-namba-and-our-national-security-strategy/>
- Government of Nigeria. (2020, August 13). *Citizen Data Management and Harmonization Report: Chairman's speech at the presentation of the report of the Committee on Citizen Data Management and Harmonization to Mr President, held at Aso Rock Villa on Thursday August 13, 2020*.
- Halisi, C. R. D., Kaiser, P. J., & Ndegwa, S. N. (1998). Guest Editors' Introduction: The Multiple Meanings of Citizenship: Rights, Identity, and Social Justice in Africa. *Africa Today*, 45(3/4), 337–349.
- Harbers, I. (2020). Legal identity for all? Gender inequality in the timing of birth registration in Mexico. *World Development*, 128, 1–11.
<https://doi.org/10.1016/j.worlddev.2019.104778>
- Harbitz, M. (2013). *The civil registry: A neglected dimension of international development*. Inter-American Development Bank.
<https://publications.iadb.org/publications/english/document/The-Civil-Registry-A-Neglected-Dimension-of-International-Development.pdf>
- Harbitz, M., & Boekle-Giuffrida, B. (2009). *Democratic Governance, Citizenship, and Legal Identity: Linking Theoretical Discussion and Operational Reality*. Inter-American Development Bank.

- <https://publications.iadb.org/bitstream/handle/11319/4300/Democratic%20Governance%2c%20Citizenship%2c%20and%20Legal%20Identity.pdf>
- Hawkins, A. (2018, July 24). Beijing's Big Brother Tech Needs African Faces. *Foreign Policy*.
<https://foreignpolicy.com/2018/07/24/beijings-big-brother-tech-needs-african-faces/>
- Hayes, B. (2017). Migration and data protection: Doing no harm in an age of mass displacement, mass surveillance and “big data”. *International Review of the Red Cross*, 99(904), 179–209. <https://doi.org/10.1017/S1816383117000637>
- Hunter, W. (2019). *Undocumented Nationals: Between Statelessness and Citizenship*. Cambridge University Press. <https://doi.org/10.1017/9781108568913>
- Hunter, W., & Brill, R. (2016). “Documents, Please”: Advances in Social Protection and Birth Certification in the Developing World. *World Politics*, 68(2), 191–228.
<https://doi.org/10.1017/S0043887115000465>
- Ibrahim, N., Nigeria Immigration Service (2017, April). *The Role of Identity Management in Facilitation and Enhancing Border Security*. ID4Africa Conference, Windhoek.
http://www.id4africa.com/2017_event/Presentations/2-D3-1_Nigeria_Immigration_Service_Nuhu_Abba_Ibrahim.pdf
- ID4Africa. (2019, July). *Conference session: The Round Table of African Data Protection Authorities (RADPA)*. ID4Africa, Johannesburg. <http://www.id4africa.com/2019-radpa/>
- ID4Africa. (2020, September 23). *Country Progress Reports: Spotlight on Nigeria*.
https://www.youtube.com/watch?v=OgcKzQ8I7_U&ab_channel=ID4AFRICAMEDIA
- Jain, S. (2019, June). *The MOSIP Approach to Foundational Identity*. ID4Africa Meeting, Johannesburg. http://www.id4africa.com/2019_event/presentations/PS4/3-Sanjay-Jain-MOSIP.pdf
- Johnston, S. F. (2018). Alvin Weinberg and the Promotion of the Technological Fix. *Technology and Culture*, 59(3), 620–651. <https://doi.org/10.1353/tech.2018.0061>
- Kak, A. (2020). The State of Play and Open Questions for the Future. In A. Kak (Ed.), *Regulating Biometrics: Global Approaches and Urgent Questions*. AI Now Institute, New York University. <https://ainowinstitute.org/regulatingbiometrics.pdf>
- Khan, M., & Roy, P. (2019). *Digital identities: A political settlements analysis of asymmetric power and information* (Anti-Corruption Evidence Consortium Working Paper No. 15; p. 28). School of Oriental and African Studies. <https://ace.soas.ac.uk/wp-content/uploads/2019/11/ACE-WorkingPaper015-DigitalIdentities-191004.pdf>
- Ladner, D., Jensen, E. G., & Saunders, S. E. (2014). A Critical Assessment of Legal Identity: What It Promises and What It Delivers. *Hague Journal on the Rule of Law*, 6(01), 47–74. <https://doi.org/10.1017/S1876404513000043>
- Latonero, M. (2018). Big Data Analytics and Human Rights: Privacy Considerations in Context. In M. K. Land & J. D. Aronson (Eds.), *New Technologies for Human Rights Law and Practice* (1st ed., pp. 149–161). Cambridge University Press.
<https://doi.org/10.1017/9781316838952.007>
- Latonero, M. (2019, July 11). Stop Surveillance Humanitarianism. *New York Times*.
<https://www.nytimes.com/2019/07/11/opinion/data-humanitarian-aid.html>
- Lee, J. (2015, November 19). Morpho identity management platform integrating civil registries and vital statistics. *Biometric Update*.
<https://www.biometricupdate.com/201511/morpho-identity-management-platform-integrating-civil-registries-and-vital-statistics>

- Lehohla, P. (2018, October 29). Digital Colonialism on the African Continent. *Independent Online*. <https://www.iol.co.za/business-report/opinion/opinion-digital-colonialism-on-the-african-continent-17686635>
- Lehohla, P. (2019, July 17). Our children are the future of the 4IR. *Independent Online*. <https://www.iol.co.za/business-report/opinion/opinion-our-children-are-the-future-of-the-4ir-29348382>
- Lichtenstein, A. (2020, January 8). Deadline looms for biometric SIM card registration in Tanzania · Global Voices. *Global Voices*. <https://globalvoices.org/2020/01/08/deadline-looms-for-biometric-sim-card-registration-in-tanzania/>
- Long, K., Mosler Vidal, E., Kuch, A., & Hagen-Zanker, J. (2017). Citizenship, migration and the 2030 Agenda for Sustainable Development. In *Migration and the 2030 Agenda for Sustainable Development*. Overseas Development Institute. <https://www.odi.org/publications/10911-citizenship-migration-and-2030-agenda-sustainable-development>
- Longman, T. (2001). Identity cards, ethnic self-perception and genocide in Rwanda. In J. Caplan & J. Torpey (Eds.), *Documenting Individual Identity: The Development of State Practices in the Modern World*. Princeton University Press.
- Madhukar, C. (2019, January 29). Launching Good ID Dialogues. *Omidyar Network*. <https://www.omidyar.com/blog/launching-good-id-dialogues>
- Malibiche, A., National Identification Authority. (2018, April). *Tanzania's Digital ID Ecosystem Roadmap: A vision for integration and enhanced service delivery*. ID4Africa Conference, Abuja. https://www.id4africa.com/2018_event/Presentations/PS2/1-2-2_Tanzania_Alphonse_Malibiche.pdf
- Malik, T. (2020). *Malawi's Journey Towards Transformation: Lessons from its national ID project*. Center for Global Development. <https://www.cgdev.org/publication/malawis-journey-towards-transformation-lessons-its-national-id-project>
- Manby, B. (2016). *Citizenship Law in Africa: A comparative study* (3rd ed.). Open Society Foundations. <https://www.opensocietyfoundations.org/publications/citizenship-law-in-africa-a-comparative-study>
- Manby, B. (2018a). *Citizenship in Africa: The Law of Belonging*. Hart Publishing.
- Manby, B. (2018b). *Citizenship and Statelessness in the East African Community*. UNHCR. <https://data2.unhcr.org/en/documents/download/66807>
- Manby, B. (2019). Case Note: Anudo Ochieng Anudo v Tanzania (Judgment) (African Court on Human and Peoples' Rights, App No 012/2015, 22 March 2018). *Statelessness and Citizenship Review*, 1(1), 170–176.
- Manby, B. (2020). 'Legal identity for all' and statelessness: Opportunity and threat at the junction of public and private international law. *Statelessness and Citizenship Review*, 2(2), 248–271.
- Mann, L. (2018). Left to Other Peoples' Devices? A Political Economy Perspective on the Big Data Revolution in Development: A Political Economy of Big Data in Development. *Development and Change*, 49(1), 3–36. <https://doi.org/10.1111/dech.12347>
- Masiero, S. (2019, September 12). A new layer of exclusion? Assam, Aadhaar and the NRC. *LSE South Asia*. <https://blogs.lse.ac.uk/southasia/2019/09/12/a-new-layer-of-exclusion-assam-aadhaar-and-the-nrc/>

- Meagher, K. (2012). The Strength of Weak States? Non-State Security Forces and Hybrid Governance in Africa. *Development and Change*, 43(5), 1073–1101.
<https://doi.org/10.1111/j.1467-7660.2012.01794.x>
- Mugo, R., Ministry of Information, Communications and Technology. (2019, June). *Kenya National Integrated Identity Management Systems*. ID4Africa Conference, Johannesburg. https://www.id4africa.com/2019_event/presentations/PS1/2-Robert-Mugo-Kenya.pdf
- Neef, D. (2015). *Digital exhaust: What everyone should know about big data, digitization, and digitally driven innovation*. Pearson Education.
- Nubian Community v. Kenya, No. 317/06 (African Commission on Human and Peoples' Rights 28 February 2015).
- Nubian Rights Forum, Centre for Minority Rights Development (CEMIRIDE), Haki Centre, Haki na Sheria Initiative, Kenya Human Rights Commission, & Defenders Kenya – Coalition. (2020, October 19). *Press Release: Huduma Namba to exclude millions of Kenyans and violates court orders under new regulations*.
<http://nubianrightsforum.org/2020/10/19/joint-press-statement/>
- Open CRVS. (n.d.). Open CRVS. <https://www.opencrvs.org>
- Perrot, S., & Owachi, G. (2018). L'enregistrement biométrique des 'autres': Indigénéité négociée, citoyenneté et lutte pour les papiers de la communauté maragoli en Ouganda. *Geneses*, 113(4), 122–143.
- Piccolino, G. (2016). Infrastructural state capacity for democratization? Voter registration and identification in Côte d'Ivoire and Ghana compared. *Democratization*, 23(3), 498–519. <https://doi.org/10.1080/13510347.2014.983906>
- Piton, F. (2019). Le papier conjure-t-il la menace? Cartes d'identités, incertitude documentaire et génocide au Rwanda. *Sociétés politiques comparées: Revue européenne d'analyse des sociétés politiques*, 48, 1–36.
- Privacy International. (2020a, February 24). *Kenyan Court Ruling on Huduma Namba Identity System: The Good, the Bad and the Lessons*.
<https://www.privacyinternational.org/long-read/3373/kenyan-court-ruling-huduma-namba-identity-system-good-bad-and-lessons>
- Privacy International. (2020b, March 3). 2020 is a crucial year to fight for data protection in Africa. *Privacy International*. <https://www.privacyinternational.org/long-read/3390/2020-crucial-year-fight-data-protection-africa>
- Raboletsi, T., National Identity and Civil Registry. (2019, June). *The Multiplier Effect of Digital ID and Financial Inclusion in Lesotho*. ID4Africa Conference, Johannesburg.
http://www.id4africa.com/2019_event/presentations/InF6/2-Tumelo-Raboletsi-Lesotho.pdf
- Rader, A. C. (2016). *Verification and legibility in Somaliland's identity architecture* [PhD, University of London, School of Oriental and African Studies].
<https://eprints.soas.ac.uk/23653/>
- Raghavan, V., Jain, S., & Varma, P. (2019). India stack—Digital infrastructure as public good. *Communications of the ACM*, 62(11), 76–81. <https://doi.org/10.1145/3355625>
- Reuben, W., & Carbonari, F. (2017). *Identification as a National Priority: The Unique Case of Peru* (Working Paper No. 454). Center for Global Development.
<https://www.cgdev.org/publication/identification-national-priority-unique-case-peru>
- Safran-Morpho. (2014). *Côte d'Ivoire: La fin d'un conflit grâce à la biométrie*.

- Salem, Z. O. A. (2018). « Touche pas à ma nationalité »: Enrôlement biométrique et controverses sur l'identification en Mauritanie. *Politique africaine*, 152(4), 77. <https://doi.org/10.3917/polaf.152.0077>
- Schoemaker, E., Curron, P., & Pon, B. (2018). *Identity at the margins: Identification systems for refugees*. Caribou Digital. <https://www.gov.uk/research-for-development-outputs/identity-at-the-margins-identification-systems-for-refugees>
- Scott, J. C. (1998). *Seeing like a State: How Certain Schemes to Improve the Human Condition have Failed*. Yale University Press.
- Scott, J. C. (2009). *The Art of Not Being Governed: An anarchist history of upland Southeast Asia*. Yale University Press.
- Secure Identity Alliance. (2019). *Putting government back in control: How the pioneering OSIA Initiative eliminates lock-in and assures interoperability for sovereign identity programs today*. <https://secureidentityalliance.org/publications-docman/osia/158-osia-white-paper-en-june19/file>
- Sen, S. (2019). *A Decade of Aadhaar: Lessons in Implementing a Foundational ID System* (No. 292; ORF Issue Brief). Observer Research Foundation. <https://www.orfonline.org/research/a-decade-of-aadhaar-lessons-in-implementing-a-foundational-id-system-50464/>
- Setel, P. W., Macfarlane, S. B., Sreter, S., Mikkelsen, L., Jha, P., Stout, S., & AbouZahr, C. (2007). A scandal of invisibility: Making everyone count by counting everyone. *The Lancet*, 370, 1569–1577. [https://doi.org/DOI:10.1016/S0140-6736\(07\)61307-5](https://doi.org/DOI:10.1016/S0140-6736(07)61307-5)
- Sinha, A. (2020). *Governing ID: Kenya's Huduma Namba Programme*. Centre for Internet and Society. <https://cis-india.org/internet-governance/digital-id-kenya-case-study>
- State of Aadhaar 2017-18*. (2018). ID Insight & Omidyar Network India. <https://stateofaadhaar.in/download-reports.php>
- State of Aadhaar: A People's Perspective*. (2019). Dalberg & Omidyar Network India. <https://stateofaadhaar.in/download-reports.php>
- Stuart, E., Samman, E., Avis, W., & Berliner, T. (2015). *The data revolution: Finding the missing millions*. Overseas Development Institute. <https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/9604.pdf>
- Sullivan, C. (2016). Digital citizenship and the right to digital identity under international law. *Computer Law & Security Review*, 32(3), 474–481. <https://doi.org/10.1016/j.clsr.2016.02.001>
- Sullivan, C. (2018). Digital identity – From emergent legal concept to new reality. *Computer Law & Security Review*, 34(4), 723–731. <https://doi.org/10.1016/j.clsr.2018.05.015>
- Sustainable Development Goal 16*. (2015). Sustainable Development Knowledge Platform. <https://sustainabledevelopment.un.org/sdg16>
- Sreter, S. (2007). The Right of Registration: Development, Identity Registration, and Social Security—A Historical Perspective. *World Development*, 35(1), 67–86. <https://doi.org/10.1016/j.worlddev.2006.09.004>
- Sreter, S., & Breckenridge, K. (2012). Editors' Introduction: Recognition and Registration: The Infrastructure of Personhood in World History. In K. Breckenridge & S. Sreter (Eds.), *Registration and Recognition: Documenting the Person in World History*. Published for the British Academy by Oxford University Press.
- ter Hennepe, J. (2012, October 10). *Mauritania integrated ePassport Project (Safran Morpho)*. International Civil Aviation Authority MRTD Symposium, Montreal, Canada.

- https://www.icao.int/Meetings/mrtd-symposium-2012/Documents/10_pm_Morpho.pdf
- The Lancet. (2007). Who Counts? (Series). *The Lancet*, 370, 9598–9601.
- The Lancet. (2015). Counting births and deaths (Series). *The Lancet*, 386, 10001.
- UN Economic and Social Council. (2019). *Introduction of the United Nations Legal Identity Agenda: A holistic approach to civil registration, vital statistics and identity management: Report of the Secretary-General* (E/CN.3/2020/15). United Nations. <https://unstats.un.org/unsd/statcom/51st-session/documents/2020-15-CRVS-E.pdf>
- UN Human Rights Council. (2014). *Birth registration and the right of everyone to recognition everywhere as a person before the law: Report of the Office of the United Nations High Commissioner for Human Rights* (A/HRC/27/22). United Nations. <http://www.ohchr.org/Documents/Issues/Children/BirthRegistration/ReportBirthRegistration.pdf>
- UN Human Rights Council. (2020). *Racial discrimination and emerging digital technologies: A human rights analysis* (Report of the Special Rapporteur on Contemporary Forms of Racism, Racial Discrimination, Xenophobia and Related Intolerance A/HRC/44/57). United Nations. <https://undocs.org/A/HRC/44/57>
- UN Independent Expert Advisory Group on a Data Revolution for Sustainable Development. (2014). *A World that Counts: Mobilising the data revolution for sustainable development*. United Nations. <http://www.undatarevolution.org/wp-content/uploads/2014/11/A-World-That-Counts.pdf>
- UN Legal Identity Expert Group. (2019). *United Nations Strategy for Legal Identity for All—United Nations Legal Identity Agenda: Concept note developed by the United Nations Legal Identity Experts Group*. United Nations. <https://unstats.un.org/legal-identity-agenda/documents/UN-Strategy-for-LIA.pdf>
- UN Statistical Office. (1955). *Handbook of Vital Statistics Methods* (Studies in Methods No. 7; Series F). United Nations. https://unstats.un.org/unsd/demographic-social/Standards-and-Methods/files/Handbooks/crvs/Series_F7-E.pdf
- UN Statistics Division. (1998). *Handbook on Civil Registration and Vital Statistics Systems: Preparation of a Legal Framework* (Studies in Methods No. 71; Series F). United Nations. https://unstats.un.org/unsd/publication/SeriesF/SeriesF_71E.pdf
- UN Statistics Division. (2014). *Principles and Recommendations for a Vital Statistics System, Revision 3* (Statistical Papers No. 19; Series M). United Nations. <http://unstats.un.org/unsd/demographic/standmeth/principles/M19Rev3en.pdf>
- UNHCR. (n.d.). Statelessness. <https://www.refworld.org/statelessness.html>
- UNICEF. (2002). *Birth Registration Right from the Start* (Innocenti Digest No. 9). United Nations. <https://www.unicef-irc.org/publications/pdf/digest9e.pdf>
- UNICEF. (2013). *A Passport to Protection: A guide to birth registration programming*. United Nations. https://www.unicef.org/media/files/UNICEF_BRHandbook_Web_single_pages.pdf
- Unwanted Witness. (2020). *Uganda's digital identification systems and processes in a protracted crisis: What can be done?* [Policy Brief]. <https://www.unwantedwitness.org/download/uploads/Ugandas-Digital-Identification-Systems-and-Processes-in-a-protracted-crisis.pdf>
- USAID. (2017). *Identity in a Digital Age: Infrastructure for Inclusive Development*. US Agency for International Development. <https://www.usaid.gov/digital-development/digital-id/report>

- van der Straaten, J. (2015). *Legal Identity for All by 2030: How will we know? [Position Paper]*. Civil Registration Centre for Development—CRC4D.
<https://www.crc4d.com/downloads/2015-10-legal-identity-for-all-by-2030-how-will-we-know-position-paper.pdf>
- van der Straaten, J. (2019, February 16). *Of Democracy, and Elections—In Reverse. On the Exorbitant (Increase in the) Cost of Elections in Africa*. Identification in the Era of Automated Decision-making, Cambridge, UK.
https://www.researchgate.net/publication/332752300_Of_Democracy_and_Elections_in_Reverse_On_the_Exorbitant_Increase_in_the_Cost_of_Elections_in_Africa_SSRN_Electronic_Journal
- van der Straaten, J., & Metz, A. Z. (2019). *South Africa ID Case Study* (No. 137142; Identification for Development Initiative). World Bank.
<http://documents.worldbank.org/curated/en/315081558706143827/South-Africa-ID-Case-Study>
- Waugaman, A. (2016). *From Principle to Practice: Implementing the Principles for Digital Development*. Principles for Digital Development Working Group.
<https://digitalprinciples.org/>
- White, O., Madgavkar, A., Manyika, J., Mahajan, D., Bughin, J., McCarthy, M., & Sperling, O. (2019). *Digital Identification: A key to inclusive growth*. McKinsey Global Institute.
<https://www.mckinsey.com/business-functions/mckinsey-digital/our-insights/digital-identification-a-key-to-inclusive-growth>
- Whitley, E. A. (2018). *Trusted digital identity provision: GOV.UK Verify's federated approach* (CGD Policy Paper No. 131). Center for Global Development.
<https://www.cgdev.org/publication/trusted-digital-identity-provision-gov-uk-verify-federated-approach>
- Winner, L. (2020). *The Whale and the Reactor: A search for limits in an age of high technology* (Second edition). University of Chicago Press.
- World Bank. (n.d.). *Glossary: Identification for Development*. Identification for Development Initiative. Retrieved 14 April 2020, from <https://id4d.worldbank.org/guide/glossary>
- World Bank. (2016). *World Development Report 2016: Digital Dividends*. World Bank.
- World Bank. (2018a). *Guidelines for ID4D Diagnostics* (Identification for Development Initiative). World Bank. <https://id4d.worldbank.org/Diagnostic-Guidelines>
- World Bank. (2018b). *ID Enabling Environment Assessment: Guidance Note* (Identification for Development Initiative). World Bank. <https://id4d.worldbank.org/legal-assessment>
- World Bank. (2018c). *Principles on Identification for Sustainable Development: Toward the Digital Age* (Identification for Development Initiative). World Bank.
<https://id4d.worldbank.org/principles>
- World Bank. (2018d). *Understanding Cost Drivers of Identification Systems* (Identification for Development Initiative). <http://hdl.handle.net/10986/31065>
- World Bank. (2018e). *West Africa Unique Identification for Regional Integration and Inclusion (WURI) Program* (Identification for Development Initiative).
<https://projects.worldbank.org/en/projects-operations/project-detail/P161329>
- World Bank. (2018f). *Côte d'Ivoire, Guinea and ECOWAS Commission—West Africa Unique Identification for Regional Integration and Inclusion Project (WURI)* (Project Appraisal Document No. PAD2480; Identification for Development Initiative).

- <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/771571528428669934/c%c3%b4te-divoire-guinea-and-ecowas-commission-west-africa-unique-identification-for-regional-integration-and-inclusion-project>
- World Bank. (2019a). *ID Enrollment Strategies: Practical Lessons from Around the Globe*.
<http://hdl.handle.net/10986/33402>
- World Bank. (2019b). *ID4D Practitioner's Guide* (Identification for Development Initiative).
World Bank.
<http://documents.worldbank.org/curated/en/248371559325561562/ID4D-Practitioner-s-Guide>
- World Bank. (2019c). *Kenya—Inclusive Growth and Fiscal Management Development Policy Financing Project: Program Document*.
<http://documents.worldbank.org/curated/en/212131559354546962/pdf/Kenya-Inclusive-Growth-and-Fiscal-Management-Development-Policy-Financing-Project.pdf>
- World Bank. (2020). *Press Release: Togo, Benin, Burkina Faso and Niger Join West Africa Regional Identification Program to Help Millions of People Access Services*. World Bank. <https://www.worldbank.org/en/news/press-release/2020/04/28/togo-benin-burkina-faso-and-niger-join-west-africa-regional-identification-program-to-help-millions-of-people-access-services>
- Zuboff, S. (2019). *The Age of Surveillance Capitalism: The fight for the future at the new frontier of power*. Profile Books.