Biometric identifiers for refugees

Political context and ethical challenges

by Emilio Mordini

Refugees are one of the main political and humanitarian problems of our time. According to the United Nations Refugee Agency, 65.3 million individuals were forcibly displaced worldwide during 2015, approximately 5.8 million more than the previous year (see Figure 1).[1] Millions of these people often do not have reliable identity documents (IDs) they need to prove their identity. In this article, Emilio Mordini explains how biometrics could play a pivotal role in the identification of refugees.

Refugees, economic migrants and illegal aliens

The term 'refugee' refers to "people who have had to abandon or flee their country of origin as a result of serious threat to their lives or freedom such as natural catastrophe, war or military occupation, fear of religions and racial or political persecution."[2] Refugees could be segmented into *internally displaced people*, who have been displaced within their country's borders (8.6 million in 2015); *asylum seekers*, people who are seeking international protection but whose refugee status is yet to be determined (2.45 million in 2015); and *stateless people*, who (for various reasons) do not have the nationality of any country (10 million in 2015). Refugees and asylum seekers are legally defined by national legislations, in accordance with the international legal framework provided by the 1951 Geneva Convention Relating to the Status of Refugees and its 1967 Protocol. At the core of this framework, there are two principles:

- the right to asylum, conceived as a fundamental human right;
- the principle of non-refoulement, which means that refugees cannot be forcibly returned to places where their lives or freedoms are threatened.

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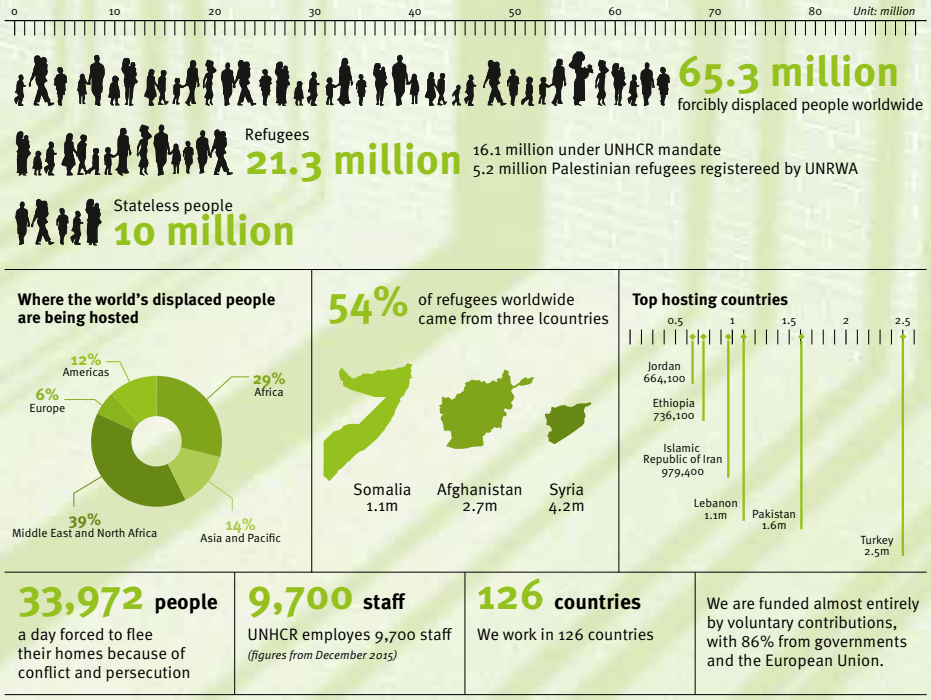


Figure 1: *Displaced persons worldwide.[1]*

People and mass media tend to confuse refugees and asylum seekers with economic migrants and illegal aliens. Economic migrants are not a legal category. They include "a wide array of people that move from one country to another to advance their economic and professional prospects."[3] Illegal aliens are foreigners who 1) have illegally entered a country, or 2) have entered a country legally, but who no longer hold a valid residence permit. At least 50% of illegal aliens, both in the US and in the EU, are undocumented immigrants, say, foreigners who have crossed borders legally, but are resident under false pretences. For instance, they entered a country with a tourist visa although they intended to work; or their residence permit has expired and was not renewed; or they lost their refugee status. Undocumented immigrants are not necessarily all criminals, at worst most of them are guilty of an administrative offense related to their failure to fulfil specific administrative requirements in order to stay in the country of destination.

Documenting the personal identity of refugees

Three main reasons can be distinguished as to why refugees are requested to proof their personal identity. The first one is that it is necessary for asylum seekers to distinguish themselves from other categories of foreigners and grant them the refugee status. Although the 1951 Convention does not explicitly prescribe that asylum seekers' applications are assessed on an individual basis, in most cases there is no alternative. On the one hand there are situations that can be evaluated only at individual level (for example, someone who claims to be persecuted in his country of origin); on the other hand applications could be rejected only at individual level to comply with the principle of non-refoulement, which prevents collective deportation. Of course, there is always the possibility of collective admissions, which are not prevented by the 1951 Convention, but even in this case personal identification is inevitable. Think for instance of the collective admission of people fleeing from a war zone. They have to prove at least that they truly come from the war zone. However, they could also be legitimately requested to demonstrate that they are not militants involved in the massacre of civilians. This is because the 1951 Convention does not apply to people who have committed a crime against peace, a war crime, a crime against humanity or a serious non-political crime.

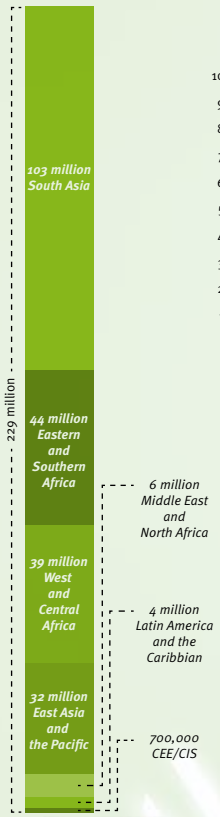
Moreover, the 1951 Convention bestows upon refugees some rights and obligations. Negative rights (for example, freedom of speech, freedom of religion and freedom of movement) and obligations (for example, respecting laws of the hosting country and complying with measures for the public order) could in principle also be applied to undocumented people, but positive rights (such as the right to work, to housing, to education and to access the courts) can be claimed only by people who are able to document their personal identity. Refugees also need to be able to document their identity to allow authorities to track and monitor them, because the refugee status is not necessarily permanent. There are at least four situations in which the refugee status could cease to exist:

- when a refugee voluntary repatriates;
- when a refugee becomes naturalised in his host country;
- when the grounds for their refugee status have ceased to exist;
- when a refugee is regarded as a danger to national security, or has been convicted of a serious crime.

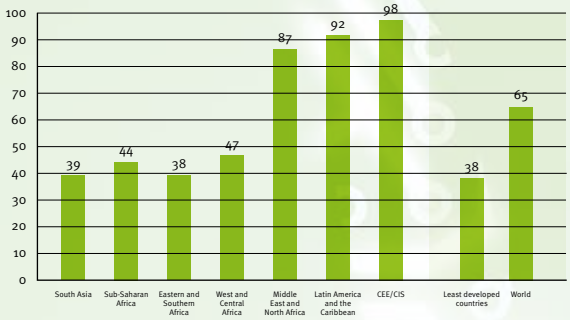
This last point leads to the third main reason why refugees are requested to document their personal identity: security. Transnational criminals and terrorists could try to exploit the 1951 Convention to infiltrate a country. Making refugees personally identifiable could help prevent infiltration, expose criminals and monitor suspects.

Globally, the births of nearly 230 million children under the age of five have never been recorded

More than half the children who have been denied their right to an identity live in Asia
Number of children under age five whose births are not registered, by region



Birth registration prevalence varies significantly across regions
Percentage of children under age five whose births are registered, by region



Percentage of children under age five whose births are registered and number of children under age five whose births are not registered, by region

	Percentage of children whose births are registered	Number of children whose births are not registered
CEE/CIS	98	700,000
Latin America and the Caribbean	92	4 million
Middle East and North Africa	87	6 million
East Asia and the Pacific	-	32 million
Sub-Saharan Africa	44	86 million
Eastern and Southern Africa	38	44 million
West and Central Africa	47	39 million
South Asia	39	103 million
Least developed countries	38	81 million
World	65	229 million

Notes: Estimates are based on a subset of 158 countries covering 83 per cent of the global population of children under age five. Regional estimates represent data from countries covering at least half of the regional population. Data coverage was insufficient to calculate the percentage of children under age five whose births are registered in East Asia and the Pacific because comparable data on birth registration are not available for China.
Sources: UNICEF global databases, 2013. Based on DHS, MICS, other national household surveys, censuses and vital registration systems, 2006-2012. Data for industrialized countries and the Russian Federation are from United Nations Department of Economic and Social Affairs, *Population and Vital Statistics Report*, Statistical Papers, Series A, Vol. LXV, Statistics Division, United Nations, New York, 2013.

Figure 2: *Unregistered children worldwide.*

Difficulties in determining personal identity

However important the reasons to determine the personal identity of refugees, we are confronted with a number of difficulties. First of all, when refugees arrive, they may not have an identity document. They sometimes throw away their IDs to avoid disclosing their names, fearing for themselves and their relatives. People fleeing from war or military occupation may have the same problem. Refugees who have escaped natural disasters have sometimes lost their documents. Moreover, children are often undocumented because they were not registered at birth. According to UNICEF, 230 million children worldwide are unregistered, which means approximately one in three of all children under five around the world (see Figure 2).[4] Finally, among 'true' refugees there could be also 'false' refugees, who are undocumented because they destroyed their IDs to hide their nationality, place of birth or age. However, even when refugees do hold a valid ID, this is often not enough.

According to the UNHCR, 54% of all refugees worldwide came from three countries: Syria, Afghanistan, and Somalia. An ID is reliable as long as it is linked through an unbroken chain, granted by the civil register or a birth certificate. It is apparent that in Syria, Afghanistan and Somalia, as well as in many other countries, there is no longer an effective civil register system (if there ever was one). Generally speaking, the civil register system is unreliable in most refugees' countries of origin, because building an effective system requires resources and bureaucratic structures often beyond the reach of low income countries.

Lastly, there is also a minor issue that is worth mentioning. Many non-western languages use writing systems different from the Latin alphabet. This means names have to be transliterated. Transliteration is rarely unique; for instance, the name 'Muhammad' can be transliterated from Arabic to the Latin alphabet in at least eight different ways. This may generate confusion and could enable the same person to submit multiple applications using differently transliterated original documents. ICAO Doc 9303, Part 3 provides in Cyrillic and Arabic transliteration tables.[5]

Providing refugees with biometric identifiers

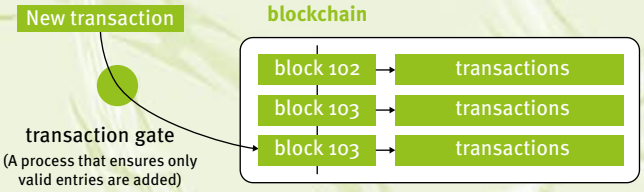
The idea to use biometrics in refugee management dates back to the late 1990s. The most obvious application concerns the use of biometrics are at border checkpoints, where biometric data helps match entry and exit records and augments normal watch list functions. Biometrics have also been increasingly used to provide IDs to undocumented refugees and refugees whose original IDs were not considered reliable. The UK and Dutch governments were among the first to use a central biometric database to manage the application, return and re-integration programmes for asylum seekers.

The effective management of refugees and asylum seekers is particularly difficult in Europe. The creation of a vast area of free movement of people (the 26 countries that abolished border control at mutual borders) without a corresponding political and administrative union has resulted in an odd situation. This area of free movement, coupled with the lack of common criteria for assessing asylum applications, created so-called 'asylum shopping'. Asylum seekers, whose applications were rejected in a given EU country, applied in another EU country, and then in another, until they found a country that granted them refugee status. Once they were accepted in a country, they moved to other EU countries, including those that initially rejected their applications. This problem was addressed with the adoption of an EU-wide information technology system for the comparison of fingerprints of asylum seekers (EURODAC) in December 2000, which became operational in January 2003. EURODAC enables EU Member States to track foreigners who have already filed an asylum application in another Member State. The EURODAC regulation was recently amended to allow law enforcement access to the fingerprints database (according to the previous regulation, the system could be only searched for asylum purposes).

EURODAC was not, however, a panacea. Collecting the fingerprints of all fingers of every applicant – as requested by the system – is hardly possible on the spot (think of boat people). Moreover, people could refuse to give their fingerprints and, according to 1951 Convention, they cannot be denied entry for just that reason. The practical difficulty in collecting biometric data on the spot and transmitting it to the Central Unit of EURODAC (which should be done within 72 hours) inevitably delays the verification of an asylum seeker's data. This time gap could be – and has been – exploited to escape controls. According to the European Border Agency Frontex, in 2015 about 1.3 million people entered the EU without a regular visa and EUROSTAT says 980,000 of these migrants have claimed asylum. During this so-called European migrant crisis EU leaders proposed to create a web of biometric hotspots for the swift identification, registration and fingerprinting of migrants, suggesting national border authorities use proportionate coercion in case of refusal to give fingerprints.

How blockchain works

A blockchain is a database shared by every participant in a given system. The blockchain stores the complete transaction history of a cryptocurrency or other record keeping system.



Transactions aren't recognised until they are added to the blockchain. Tampering is immediately evident and the blockchain is safe as record, because everyone has a copy. The source of discrepancies is also immediately obvious.

Figure 4:
How blockchain works. (From http://zdnet.com/blog/hinchcliffe on ZDNet. by Dion Hinchcliffe)

In the meantime, international organisations have also considered using biometrics to document refugees' personal identity. In 2014, the World Bank Group presented the Identification for Development Initiative (ID4D), aiming "to help countries reach the recently adopted Sustainable Development Goal target of 'providing legal identity for all, including birth registration, by 2030'."[6] The UNHCR launched a plan to provide displaced persons with biometric ID cards. After initial experiments in Senegal and Malaysia, in 2015 the UNHCR announced they had developed the Biometric Identity Management System (BIMS). This system for scanning and registering fingerprints and facial and iris images is already available in Apple and Android app stores.[7] These three biometrics are stored with biographic data on cards (see Figure 3) and in a central database in Geneva.

Figure 3:
A UNHCR biometric ID.

The UNHCR's biometric identity management system could be the blueprint for a global ID system. A global ID scheme should not necessarily replace national ID systems, which could still work locally, but it could become a supranational scheme that facilitates cross-border mobility, while raising security standards.

Biometrics and the blockchain

The blockchain technology is chiefly known as the technology that underpins Bitcoin and other crypto-currencies. Yet, this technology has a lot of potential beyond supporting electronic currencies. A blockchain is a distributed database that keeps an ongoing list of transaction records protected against manipulation and revision (see Figure 4). It consists of data blocks, which each contain batches of transactions, a time-stamp, and information linking it to a previous block. Blocks can be used to prove ownership of a document at a certain time, by including a one-way hash of that document in the transaction. Basically, any electronic transaction can be certified through a blockchain. Individuals could thus record any document that proves their identity on the blockchain. The structure of the blockchain guarantees that the chain between the original document and the transaction based on that document remains unbroken. Information in the block-chain does not need to be guaranteed by a third party (i.e. local community, state bureaucracy, UNHCR) nor does it need to be stored in a centralised database.

There are currently several applications in development, which couple biometrics and blockchain technology.[8] Most of them use the blockchain to secure biometric information and prove its integrity. Once secured, encrypted and unusable for any other purpose, biometric data is definitely more manageable. However, these applications are far from ready to meet the needs of refugees and other disadvantaged mobile groups.

In 2015, BITNATION, a decentralised, open-source movement, launched the 'BITNATION Refugee Emergency Response' (BRER), an application still in its embryonic stages that would provide refugees and asylum seekers with a 'Blockchain Emergency ID' (BE-ID) and 'Bitcoin Debit Card' (BDC).[9] An individual's biometrics would be included in the blockchain and then used to issue both an ID and a debit card. The goal is to provide refugees with a political and financial solution without relying on hosting country resources or on international organisations. "(We) out-compete governments by providing the same services cheaper and better through the blockchain," according to Susanne Templehof, founder of BITCOIN.[10]

Ethical and political challenges

Since the late 1990s, biometrics have been a source of much ethical and political controversy. An overview of the discussion can be found in the entry *Biometrics* in the *Handbook of Global Bioethics*,[11] a longer, more detailed, discussion in *Second Generation Biometrics: the Ethical and Social Context*.[12] There are, however, two main issues that should be addressed here, because they are particularly relevant to the refugee subject.

The first is the 'endless' question whether biometrics offend human dignity. The question was raised some years ago by the prominent philosopher Giorgio Agamben, who argued that gathering biometric data from refugees and other mobile groups is a form of tattooing, akin to the tattooing of Jewish prisoners in Auschwitz.[13] What makes human life (*bios* in ancient Greek) different from bare life (zoe in ancient Greek) is its historical, biographical dimension. There are times, he argues, when rulers create indistinct zones between *bios* and *zoe*. In these areas, humans are stripped of everything except the fact that they have a bare life. "No human condition is more miserable than this, nor could it conceivably be so. Nothing belongs to us anymore; they have taken away our clothes, our shoes, even our hair; if we speak, they will not listen to us, and if they listen, they will not understand. They will even take away our name."[13] In Auschwitz, prisoners' names were substituted by numbers: "My number is 174517; we have been baptised, we will carry the tattoo on our left arm until we die."[13] To Agamben, this is the deeper sense behind the adoption of biometric cards. Biometrics are carved in the flesh, like tattoos on people and brands on livestock. Refugees, Agamben suggested, are only at the first step in a process that is going to affect everybody in the near future. The global citizen would be progressively treated as, and consequently turned into, a branded beast – maybe satisfied and well-fed – but finally sent to slaughter.

The second issue raised by biometrics for refugees concerns the creation of centralised databases. Centralised databases may increase security risks. If they are compromised, the entire identification system is threatened. Moreover, large centralised biometric databases are an easy target for hackers and other malicious entities, also because designers – in order to prevent system failure – often build in high redundancy in parallel systems and mirrors, thereby adding further vulnerabilities. Centralised databases also raise ethical and privacy concerns. One of them is the risk of *function creep*, which is the term used to describe the expansion of a process or system, where data collected for one specific purpose is subsequently used for another unintended or unauthorised purpose. When function creep results from a deliberate intention, it represents a serious ethical, sometimes also legal, offence. The ISO SC37 Harmonised Biometric Vocabulary uses the term 'subversive use' instead. Storing refugee information may also provide a golden opportunity for insider abuse.

A further aspect to be considered concerns the possibility that raw samples (e.g. face pictures) are stored in the database together with biometric templates. Likewise, it could happen that multiple biometrics are stored in the same database, or multiple databases are linked together. All these situations increase the sensitivity of biometric information and amplify the risk that biometric databases are used to elicit information on ethnicity, religious beliefs, sexual orientation, political and philosophical opinions of people included.

Personal identification information has often been used to identify and discriminate against ethnic, political and religious groups. IDs can be, and have been, used for profiling and segregating minorities, for deportation, ethnic cleansing and genocide. These risks may seem remote (especially if such a database were managed by the United Nations), however it is impossible to exclude the possibility of theft or abuse of the information by a malicious entity. Moreover, there is always the possibility that a legitimate authority covertly uses the central database for its hidden agenda or to monitor specific religious or ethnic groups. All these risks are magnified in case of a global ID scheme, a truly nightmarish scenario for most privacy advocates.

Conclusions

Huge masses of people are on the move across nations and continents. As paper IDs and standard schemes based on civil registers are often insufficient, the world needs new systems for personal identification. Most refugees lack reliable ID. Providing refugees with stronger personal identifiers is a security measure for

the hosting country, but it is also a way to bestow fundamental rights upon refugees. Being an identifiable person is a prerequisite in order to enjoy civil, political, and social rights.

From a technical point of view, biometrics could play a pivotal role in replacing current identification practices. Concerns regarding the creation of centralised biometric databases could probably be overcome using blockchain technology. The blockchain network is by definition trustless and decentralised. In practice, it means that neither national institutions nor international institutions or large corporations, would 'own' and control biometric data of refugees. Biometric information would be secured within the blockchain, making theft and forgery of biometric details highly unlikely.

Finally, the blockchain could provide higher data granularity, which is a precious feature in databases that store multiple biometrics and non-biometric information. Higher data granularity means that one could operate on smaller, and more focused, pieces of information, thereby limiting the risk of function creep and data leakage. Such a system could continually grow like a rhizome, made up of several distributed, interoperable networks, which also cover non-refugees (such as international travellers and economic migrants). In the end, the goal of creating a global, open access scheme for personal identification could be achieved, without the need for (and the risk of) empowering a 'global data controller'.
Would such a scheme also address the concerns about the ethical and political legitimacy of biometric identification? No, it wouldn't. Agamben's concern – and other similar concerns – cannot be solved with a technological solution. It would require a much more in-depth discussion, well beyond the scope of this article. But it is possible to make a point here.

To 'dehumanise' the prisoners in the Nazi camps, they were deprived of their identity. On their arrival in the camp, they were still humans, then the implacable law of the camp turned them into beasts or killed them, or often both. This is tragically described by Primo Levi.[14] Refugees, however, have already lost their humanity by the time they arrive. They lose it in their countries of origin and when they leave, losing everything except their bare life. They are 'dehumanized' during their tragic journey, hidden in a truck, pressed together like cheap merchandise, or in small crumbling boats carrying hundreds of them. When a refugee tries to cross the barbed wire at the border of the country of arrival, he does not want to enter into a 'concentration camp', rather he wants to flee from the concentration camp where he used to live. Refugees' names are not stripped away when they arrive, because, when they arrive, they are an anonymous, dispersed, powerless mass.

In ancient Rome, slaves were nameless, they just had a nickname given by their owner. When a slave was freed, he could finally have a name and a surname. This also marked his transition from an 'object' to a human being. So, making people identifiable does not mean to 'dehumanize' them. On the contrary, it is the first step in restoring their lost humanity.

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