The lack of formal identification of the Rohingya population

Research into the extent to which identification through blockchain technology improves refugee access to civil, political, and social rights.

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*E. E. Cummings, [i carry your heart with me (i carry it in] 1952 https://www.poetryfoundation.org/poetrymagazine/poems/49493/i-carry-your-heart-with-mei-carry-it-in accessed 22 June 2019

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List of Abbreviations

ARSA	Arakan Rohingya Salvation Army
CGD	Center for Global Development
CRC	Convention on the Rights of the Child
ICCPR	International Covenant on Civil and Political Rights
ICESCR	International Covenant on Economic, Social, and Cultural Rights
IDP	Internally Displaced Persons
MDG	Millennium Development Goals
NRC	National Registration Card
NVC	Nationality Verification Card
SDG	Sustainable Development Goal
TCR	Temporary Registration Card
UN	United Nations
UDHR	Universal Declaration on Human Rights
UNHCR	United Nations High Commissioner for Refugees
WBG	World Bank Group
WFP	World Food Program

Chapter 1. Introduction

1.1 Problem statement and relevance

In recent years, approximately 723,000 Rohingya fled from violence and armed attacks in Myanmar through a sea journey and crossed the border to other Asian countries, especially Bangladesh.[1] The Rohingya are Muslims who speak a specific dialect originating from the Bengalis. Around 1960, the term "Rohingya" was used to identify this ethnic-religious group and distinguishes them from the Buddhists. They share the place where they live in Myanmar, nowadays called Rakhine state, with the Buddhists, who represent most of the population.[2]

This population has been denied by the Burmese government, among others, the right to an adequate formal identification,[3] implying the impossibility of exercising their civil, political and social rights. Their lack of proper documentation is related to the connection between their ethnicity, the government and the Burmese legislation, especially after Myanmar's independence.[4] Since then, using ethnic-based nationality laws, governments that succeeded in power do not recognize the Rohingya as Burmese. By not recognizing this population as part of Myanmar nor acknowledging its ethnicity, and consequently its nationality, the Burmese government has imposed on them a process of statelessness.[5] Without documents and without nationality, the Rohingya suffer numerous deprivations and abuses at different levels in Myanmar as well as in the host countries. They are subjected to degrading treatment that includes sexual violence against women, forced to work, and kept in internal encampments. In addition, their properties are confiscated, their children are deprived of education, and they lack access to health care as well as formal work.[6]

Because they have no official documents guaranteeing them civil, political, and social rights, they cannot legally leave the country and typically cross the border into Bangladesh by boat after paying human traffickers.[7] Therefore, a history of discrimination and segregation of Rohingya is strongly linked to inadequate identification documents or the absence of these documents.[8] For years the Burmese government exploited the stateless Rohingya by

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[1] 'Rohingya Emergency' (*UNHCR,* 15 August 2018) <https://www.unhcr.org/rohingya-emergency.html> accessed 4 March 2019

[2] Jacques Leider, 'Rohingya: The History of a Muslim Identity in Myanmar' (*Oxford University Press,* May 2018) <https://oxfordre.com/asianhistory/view/10.1093/acrefore/9780190277727.001.0001/acrefore-9780190277727-e-115> accessed 21 June 2019

[3] Archana Parashar and Jobair Alam, 'The National Laws of Myanmar: Making of Statelessness for the Rohingya' (2019) 57 IM 94

[4] Leider, 'Rohingya' (n 2)

[5] 'Myanmar military leaders must face genocide charges – UN report' (*UN News,* 27 August 2018) <https://news.un.org/en/story/2018/08/1017802> accessed 3 December 2018

[6] UN High Commissioner for Refugees, *Culture, Context and Mental Health of Rohingya Refugees: A review for staff in mental health and psychosocial support programmes for Rohingya refugees* (UNHCR 2018)

[7] Fiona MacGregor, 'Thousands at Risk of Trafficking Amid Rohingya Refugee Crisis' (*IOM,* 31 July 2018) <https://www.iom.int/news/thousands-risk-trafficking-amid-rohingya-refugee-crisis-iom> accessed 21 January 2019

[8] Leider, 'Rohingya' (n 2).

confiscating identification cards and issuing new documents that changed the ethnicity of the Rohingya to Bengali, the result of which presented a huge identification problem.[9]

But why identify and register people? An identification document for an individual is a crucial step for obtaining certain rights as it is a central means for their nationality and citizenship recognized.[10] It is also a way to know the population, to provide effective legal and physical protection, and to identify specific needs of a set of people. The lack of a formal identification, therefore, can cause great problems and omit many rights. The importance of identification documents become obvious once there is no access to them. Formal identification can prove an individual's identity and enables him or her to vote, study, work, travel, move, etc.[11] This is even more relevant once outside the country of origin. The same happens in the case of some benefits, such as retirement or pension payments, that can only be obtained by having a formal identification. A formal identification is also one of the requirements to exercise the civil and political rights as set out in the International Covenant on Civil and Political Rights (ICCPR)[12] and in the International Covenant on Economic, Social, and Cultural Rights (ICESCR).[13] The Universal Declaration on Human Rights (UDHR) stipulates in article 6 that "Everyone has the right to recognition everywhere as a person before the law".[14] The states that signed these instruments should guarantee to the people within their territories and under their jurisdictions the rights conceded in the documents. The structure of international law dictates that for an individual to exist from a legal point of view, he or she needs a state to recognize that existence and his/her belonging. This interweaves civil, political, and social rights with a citizen status. Therefore, formal identification contributes to access to civil, political, and social rights. In the case of the Rohingya specifically, a formal identification that recognizes their nationality could allow them to access civil, political, and social rights. If the identity document is imposed on them without establishing their nationality, however, it would confirm the exclusion of the rights of that population. [15]

The absence of documents and citizenship can also be a problem in the host countries. An officially recognized formal identification is necessary in order for the Rohingya to have certain rights, such as education and healthcare, and to have access to certain services in their destination countries.[16] It is within this range that the use of blockchain in relation to refugees connects with the issue of lack of identification. New blockchain technologies might present a potential solution for this need for identification: a project aimed at granting a digital identity

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[9] Parashar and Alam, 'The National Laws of Myanmar: Making of Statelessness for the Rohingya' (n 3)

[10] Bronwen Manby, 'Introduction' in Introduction (ed), *Citizenship and Statelessness in Africa: The law and politics of belonging* (Wolf Legal Publishers 2015)

[11] Julia Clark and others, *Digital Identity: Towards Shared Principles for Public and Private Sector Cooperation* (International Bank for Reconstruction and Development 2016)

[12] International Covenant on Civil and Political Rights (General Assembly resolution 2200A -XXI- of 16 December 1966)

[13] International Covenant on Economic, Social and Cultural Rights (General Assembly resolution 2200A -XXI- of 16 December 1966)

[14] Universal Declaration of Human Rights 1948 (General Assembly resolution 217 A)

[15] Leider, 'Rohingya' (n 2)

[16] Bronwen Manby, *Identification in the Context of Forced Displacement: Identification for Development (ID4D)* (World Bank 2016)

to the Rohingya outside the Burmese territory has proposed blockchain technology as a solution to the Rohingya's problem.[17] The Rohingya Project has pioneered a decentralized blockchain application that provides digital identities to the stateless Rohingya people in Bangladesh, Saudi Arabia, and Pakistan. The main objective is to enable the Rohingya to have their economic and social capacity elevated using self-sovereignty. The idea is to create a safe, international tool for this population to have access to financial investments and other services.[18] In the first phase, a digital identity will be provided to the Rohingya. Different methodologies, such as interviews and assessments, will be used to confirm the Rohingya ancestrally. In phase two, the Rohingya can use this digital identity to access other distributed applications to receive services. As will be discussed in the forthcoming sections according to what has been said in the technology market, these blockchains were chosen as they have several technical characteristics that have been piloted as a means of establishing similar formal identifications among governmental, public, private, and humanitarian actors.

1.2 Literature Review

Governments and humanitarian organizations have invested heavily in implementing digital systems for the management of personal data and identities. The literature about the use of certain technologies to promote identification on the part of non-governmental entities as well as international public and private entities is very positive. Reports have been published, for example, that highlight the importance of identification to have access to certain services. As can be seen in the World Bank Group and Centre for Global Development document, published in 2016: "As a result, digital identification systems can create enormous savings for citizens, governments, and businesses by reducing transaction costs, increasing efficiency, and driving innovation in service delivery, particularly to the poorest and most disadvantaged groups in society. Many developing countries have already used such systems to improve governance, boost financial inclusion, reduce gender inequalities by empowering women and girls, and increase access to health services and social safety nets for the poor".[19] On the other hand, certain authors with a more extended bias about the role of the identification of individuals emphasize this identification as a means for individuals to also exercise their civil and political rights beyond accessing basic services. Manby points out that "possession of an identity card may be key to accessing all kinds of rights restricted to citizens, including not only voting and other political rights, but also health care and education, as well as participation in the formal economy. The national identity card may also be necessary to obtain a passport".[20]

In the literature review it is possible to verify that an identification document does not always guarantee an individual's access to his or her rights. In many cases, the identification

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[17] Skot Thayer and Alex Hern, 'Rohingya turn to blockchain to solve identity crisis' (*The Guardian,* 21 August 2018) <https://www.theguardian.com/world/2018/aug/21/rohingya-turn-to-blockchain-to-solve-identity-crisis> accessed 8 January 2019

[18] 'Rohingya Project' (*Rohingya Project*) <http://rohingyaproject.com> accessed 7 February 2019

[19] World Bank, *Identification for Development - Strategic Framework* (World Bank 2016)

[20] Bronwen Manby, *Nationality, Migration and Statelessness in West Africa: A study for UNHCR and IOM* (UNHCR 2015)

ends up being used for other purposes, such as discrimination and surveillance, instead of solving the real problems of refugees. According to Farraj, biometric registration has a significant positive influence on both refugees as well as governments. For governments it enhances their security in the fight against terror; to the refugees it offers them a chance to have a formal identification and offers them a political viability. Biometric registration also plays a crucial role in aiding humanitarian efforts. The problems of biometric registration arise, however, in its implementation, when concerns such as violation of privacy, stigmatization, and misidentification arise.[21] These concerns need to be addressed for such a process to be a suitable method for fighting terror and for protecting refugees . Nonetheless, identification for refugee populations has serious issues that must be addressed. For instance, how refugees are seen and treated by the state and the private sector in relation to technological solutions. According to Taylor, as the availability of digital data on human and economic development increases, so has data-driven discrimination. Moreover, because there are no proper mechanisms of combating it, technological advances such as biometric registration continues to infringe on people's rights.[22] Despite the many challenges in registration technologies, additional findings by Hustinx show that the information technology systems have been widely accepted, with countries such as Germany, Canada, the United Kingdom, and the Netherlands having invested in them.[23]

According to De Filippi and Wright, blockchain technology has been employed as a method to secure and decentralize peer-to-peer applications. Which have been compared to the internet as a result of its impact, and the courts state the underlying significance of the technology since it is deemed as a tool for societal change.[24] Ideally, the authors' conception of LEX cryptography may be thought of as a regulation system that creates order in the absence of law as they are not bound by it. Moreover, in comparison to the use of code as some centralized authority, blockchain technology no longer requires a centralized agent, hence becoming stronger and less susceptible to outside influence. The authors recognize that the law can catch up with blockchain technology because disintermediation as a tool sabotages vital regulation. Furthermore, the rule of code has blockchains operating at a high level of risk to block out the central authorities such as multi-national corporations as well as online operators. From this perspective, blockchain software both generates and distributes permanent ledgers in a network of computers and is rarely traceable by governmental departments. Accordingly, this research is intended to address if the decentralized blockchain technology can solve the Rohingya's difficulties through identification.

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[21] Achraf Farraj, 'Refugees and the Biometric Future: The Impact of Biometrics on Refugees and Asylum Seekers' (2011) 42 CHRLR 891
[22] Linnet Taylor, 'What is data justice? The case for connecting digital rights and freedoms globally' (2017) 4 BDS 1
[23] Peter Hustinx, 'Privacy by design: delivering the promises' (2010) 3 IIS 253
[24] Primavera De Filippi and Aaron Wright (eds), *Blockchain and the Law: The Rule of Code* (HUP 2018) 6

1.3 Research Question, Sub-questions, and Methodology

The primary question that forms the framework for the analysis in this work is thus as follows:

To what extent would identification through a blockchain solution improve the access of Rohingya refugees to civil, political, and social rights? (Some of the most important rights in these 3 categories: i) Civil and Political Rights: the right to the judicial system,[25] the right to equal protection before the law,[26] the right to participation in political life,[27] the right to freedom of assembly,[28] the right to freedom of expression,[29] the right to freedom of religion,[30] the righto to family and private life,[31] the right to freedom of movement,[32] the right to liberty and security of the person;[33] the right to be free from torture,[34] and ii) Social Rights such as: the right to education,[35] the right to health,[36] the right to housing,[37] the right to adequate standard of living,[38].)

To answer this question, the following sub-questions need to be answered:

1. What is the purpose of identification of an individual in relation to civil, political, and social rights?

2. How are Rohingya refugees deprived of civil, political, and social rights, such as the right to vote, to choose where they want to live, or to citizenship, in the absence of identification?

3. What is a blockchain and to what effect can a blockchain-based application be used for identification in relation to refugees?

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[25] International Covenant on Civil and Political Rights (General Assembly resolution 2200A -XXI- of 16 December 1966), art 14, 3 (d)

[26] Ibid, art 26. See also Universal Declaration of Human Rights 1948 (General Assembly resolution 217 A) art 24

[27] Ibid, art 25. See also Ibid, art 21

[28] Ibid, art 21. See also Ibid, art 20, Convention on the Rights of the Child (General Assembly resolution 44/25 of 20 November 1989) art 15

[29] Ibid, art 20. See also Ibid, art 19, Ibid art 14 (1)

[30] Ibid, art 18. See also Ibid, art 18, Ibid art 14

[31] Ibid, art 23. See also Ibid, art 16, Ibid art 16

[32] Ibid, art 12. See also Ibid, art 3, Ibid art 10

[33] Ibid, art 9 and 10. See also Ibid, art 3, Ibid art 9

[34] Ibid, art 7. See also Ibid, art 5, Ibid, art 37, Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment (General Assembly resolution 39/46 of 20 November 1984) art 2

[35] International Covenant on Economic, Social and Cultural Rights General Assembly resolution 2200A -XXI- of 16 December 1966) art 13

[36] Ibid, art 12

[37] Ibid, art 11

[38] Ibid

4. What are the benefits and the drawbacks of using a blockchain-based application to identify the Rohingya refugees to give them access to certain services and rights?

1.4 Methodology

For the purposes of this work, two types of methodology will be used. First, qualitative doctrinal research will be used to locate, where possible, legal sources concerning the topics involved in this research: identification, refugees, and blockchain applications. Interpretation of such sources will then be made, and empirical research will analyse the verifiable evidence to a conclusion. Such evidence will be obtained through the qualitative method of analysis of a Rohingya case study to generate hypotheses as to the viable use of blockchain for the identification of refugees.

Different literary sources were used per each research sub-question. To answer the first sub-question, traditional (doctrinal) legal research and legislation relating to the subject, such as ICCPR, ICESCR and UDHR, that addresses identity and identification issues will be used. The second question required an analysis of existing legislation, such as the Convention Relating to the Status of Refugees,[39] to understand the legal framework for this topic. Secondary research sources, such as newspaper articles, business publications, and reports from non-governmental organizations were also incorporated to understand the situation of the Rohingya and the lack of documentation that affects this population. This includes the similarities and differences of the Rohingya population to other refugee groups in this context. The use of all those sources is what will enable the understanding of what exactly makes the Rohingya a case so complex and different. To answer the third and fourth sub-questions, a technical literature that explains blockchain characteristics and properties, as well as its design and architecture, will be consulted. Academic articles, reports, and books will be reviewed to develop an understanding of relevant terms and concepts alongside the applicability of blockchain technology. In addition, the characteristics of decentralized blockchain solutions applied to identity will be analysed. These literary sources will be used to test whether the blockchain is able to solve the problems of identification of the Rohingya and consequently the stated lack of access to civil, political, and social rights.

1.5 Scope and thesis structure

The first chapter of the thesis presents the Rohingya case study, the importance of formal identification in an individual's life and its relationship with this population. There is a brief description of what is being proposed to address the lack of identification. The chapter also addresses the relevance of the research, the main issues, and the sub-questions. The existing literature and a brief description of the following chapters are also presented.

The second chapter discusses the importance and the role of identification in the life of an individual, regarding his or her civil, political, and social rights. To that end, an

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[39] Convention relating to the Status of Refugees (General Assembly resolution 429 (V) of 14 December 1950)

introduction about identity, nationality and citizenship will be made followed by analysis of the purposes of identification and the right to identification. To explain this last point, a brief analysis of these civil, political and social rights will be made and Sustainable Development Goals (SDGs)[40] on identity will be addressed.

The third chapter discusses the ways in which refugees are deprived of civil, political and social rights, such as the right to vote, to choose where they want to live, and to citizenship, when they lack essential identification. An introduction to the Rohingya case will be made, followed by a discussion of how the lack of identification has presented problems and deprived the Rohingya of important rights. As part of this chapter's discussion, a set of issues that need to be resolved in relation to the Rohingya will be presented.

The fourth chapter of this thesis adopts a more technical-theoretical approach, as it provides an in-depth explanation of the features of the blockchain technology and its architecture. Due to the fact that the blockchain technology is *sui generis*, its technical characteristics are described in a subsection in the fourth chapter and subsequently will be analysed at the intersection of blockchain technology and the identification of refugees. Discussion will centre upon what problems in relation to this population can be solved by the decentralized blockchain along with the issues it might raise. It will be indicated how blockchain has been claimed to be connected to the situation of the Rohingya and how this research analyses the possible contribution of Blockchain to this population.

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[40] United Nations Sustainable Development, 'About the Sustainable Development Goals' (*United Nations)* <https://www.un.org/sustainabledevelopment/sustainable-development-goals> accessed 15 December 2018

Chapter 2. The purpose of an individual's identification

2.1 Introduction

Identification documents have formed an important part of people's lives since ancient times. In a passage in the Bible, Nehemiah asks the King of Artaxerxes for a letter of introduction to be given to the other governors and to the guardian of Judah that would tell them who he was and what the purpose of his journey was.[41] This letter was used to identify Nehemiah and grant him the right to travel between kingdoms.[42] Just like then, documents are necessary to prove the identity of a natural person and its existence before the state and society. This is evidenced by how identification documents are used for a range of things, from everyday purposes to simple social interactions.

The need for an instrument capable of proving who in fact a person is and, therefore, allowing access to certain rights (such as the right to travel) has permeated the history of humanity. The forced plight of the Rohingya is a current situation in which the need for identification is reinforced. Rohingya refugees have been forced to grapple with a lack of identification, the inability to identify oneself properly, and the impossibility to have their rights recognized. This case will be further discussed in Chapter 3. In this chapter, the purpose of identification of an individual is discussed in relation to civil, political, and social rights. In Section 2.2, the concept of identity, including formal identification, nationality, and citizenship is explained. In addition, the purpose of identity is explained more fully. In Section 2.3, the need for a formal identification to access civil, political, and social rights are discussed. Finally, Section 2.4 discusses the SDGs to provide everybody with legal identity and how this relates to the lack of identification for the Rohingya.

2.2 Identity, formal identification, nationality, and citizenship

Identity is a dynamic and dubious notion that depends on the individual as well as on other people. It can be understood as a subjective concept of who an individual, a group of people or a thing is/are and how they see themselves. As well as how an individual is being viewed by others. Identity can also be an objective concept when objective predetermined standards are used to identify an individual, such as ancestry and age for example. It may be defined as something or someone, being identical to something or someone else, or as what

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[41] 'Nehemiah, 13' (*Bíblia Católica Online*) <https://www.bibliacatolica.com.br/new-jerusalem-bible/nehemiah/13> accessed 8 February 2019

[42] "I also said to him, "If it pleases the king, may I have letters to the governors of Trans-Euphrates, so that they will provide me safe-conduct until I arrive in Judah? 8 And may I have a letter to Asaph, keeper of the royal park, so he will give me timber to make beams for the gates of the citadel by the temple and for the city wall and for the residence I will occupy?" And because the gracious hand of my God was on me, the king granted my requests. 9 So I went to the governors of Trans-Euphrates and gave them the king's letters. The king had also sent army officers and cavalry with me.", Ibid, 2:7-9

makes someone unique in relation to others. The definition of the concepts of identity will vary according to the fields in which it is studied.[43] Anthropology works with identity as the interpretation of sociocultural relations between people. For sociology, identity is the sharing of ideas and ideals. For some sociological theorists like Karl Mannheim, people form their personality, but they also add elements through their social interaction.[44] This means that the identity of a person is the sum of his or her own characteristics added to the acquired characteristics of the environment in which he or she lives. In philosophy, identity is what makes an individual different from others and the concept focuses on the uniqueness of the individual in question.[45] The social identity theory establishes that a person's concept of self comes from the groups to which that person belongs.[46] Although all concepts have different nuances, there is a common element that is vital to this research: all of them are formed from the interactions and perceptions of an individual related to others. Regardless of the concept employed, identity plays a fundamental role in understanding the Rohingya crisis. If the sense of identity used is that of belonging to a community, it can be said that the Rohingya are rejected by the Buddhist community and by the government of Myanmar, which does not acknowledge them as part of that nation.[47] Viewed from the standpoint of what makes them unique as a community, however, the Rohingya also have their identity disrespected when they are forced to accept the designation as Bengalis. Consequently, nationality, and citizenship must also be examined to understand how the lack of civil, political, and social rights in this research relates to the Rohingya people's identity and formal identification.

(i)   Identification

Being in possession of an identification document is not synonymous with being identified. For a person to be identified, his or her identity must be recognized when confronted with the elements that constitute an identification document, such as a photograph and/or birth date. This process requires at least two parties, because a person cannot recognize his or her own identity. This identification must be done through a reliable resource, such as a document, set of documents, biometric technology or other forms.[48] This resource contains personal data, like name, date of birth, gender, affiliation, fingerprint, photo and/or signature that when combined can identify a person. A birth certificate is usually the first identification document of an individual and, although it is not a guarantee of nationality, it is an important instrument for its recognition.[49] This document proves his or her existence, place and date of birth and the identity of his or her parents. It also allows children to have access to health care, to attend

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[43] Jan E. Stets and Peter J. Burke, 'A sociological approach to self and identity' in Mark R. Leary and June Price Tangney (eds), *Handbook of Self and Identity* (Guilford P 2003)

[44] John Heeren, 'Karl Mannheim and the Intellectual Elite' (1971) 22 BJS 1

[45] Daniel Sollberger, 'On identity: from a philosophical point of view' (2013) 7 CAPMH 29

[46] Henri Tajfel and John C. Turner, 'The Social Identity Theory of Intergroup Behavior' in John T. Jost and Jim Sidanius (eds), *Political psychology: Key readings* (Psychology P 2004)

[47] Leider, 'Rohingya' (n 2)

[48] Manby, *Nationality, Migration and Statelessness in West Africa* (n 19)

[49] Ibid

school and obtain other identity documents.[50] In many situations, a document that was not specifically thought to be a source of identification can become one.[51] For instance, many passports do not contain citizens' parents' names, which is important information to distinguish a person. Its purpose is to be a travel document, although it can also be used as an identification document. In other circumstances, an individual obtains several types of identity documents throughout his or her life that individually are not able to identify him or her. This makes it more difficult to identify someone, especially one from a vulnerable refugee population. The sum of what the person claims to be needs to be added to the data set of the formal identification to prove their identity. For example, a Rohingya should have his or her identity formally confirmed when what he or she says is confirmed with his or her identification document. As they do not have an adequate identification document and because their identity is rejected by the government, therefore, they are not properly identified.

(ii)   Nationality

Related to the concept of formal identification is nationality. Nationality is a legal bond that unites a natural person to a state in the terms defined in the legal instruments of that state. [52] This means that nationality is a matter of domestic law; and, although it is the subject of international treaties; it is not an international institution. Therefore, the concept of nationality by itself is controversial. On this matter there is considerable divergence among scholars. On the one hand, there are authors, such as the lawyer and co-author of the Convention Relating to the Status of Refugees, Paul Weis, who understands the term as follows: "nationality, though determined by municipal law, is itself a concept of international law. The co-existence of States and the existence of international relations constitutes – at least in modern times – the prerequisite of the concept of nationality".[53] Weis opines that the concept of nationality is elastic and can be used by international law in a different sense from that which is established internally by a State. On the other hand, some authors consider nationality to be a matter that relates strictly to international law. Nationality is a concept of international law, citizenship a concept of municipal law. International law is only concerned with nationality, the belonging of a person to a State.[54] The theme of nationality is present in several international instruments. The Convention on the Reduction of Statelessness of 1961 establishes that "States shall grant their nationality to any person born on their territory if that person would otherwise be

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[50] General Assembly, *Annual report of the United Nations High Commissioner for Human Rights* (United Nations 2014)

[51] Manby, 'Introduction' (n 10)

[52] Rainer Bauböck and others (eds), *Acquisition and Loss of Nationality. Volume 1: Comparative Analyses - Policies and Trends in 15 European Countries* (Amsterdam UP 2006)

[53] Paul Weis, *Nationality and statelessness in international law* (Hyperion Press 1979)

[54] Stanford Encyclopedia of Philosophy, 'Citizenship' (*Center for the Study of Language and Information (CSLI), Stanford University,* 13 October 2006) <https://plato.stanford.edu/entries/citizenship/> accessed 18 February 2019

stateless".[55] Another international treaty with provisions on this subject is the Universal Declaration of Human Rights that stipulates in its article 15 (1) that 'Everyone has the right to a nationality'.[56] As well the United Nations Convention on the Rights of the Child (CRC), which states that every child has the right to acquire a nationality.[57] The granting of nationality in general, however, is based on what the domestic law of a particular State establishes. In the case of the Rohingya, their population has become stateless because of the Burmese legislation that is exclusive and ties nationality to ethnic groups, a point further explored in the next chapter.[58]

(iii)   Citizenship

Finally, the concept of citizenship also requires clarification. Citizenship can be understood as a legal and political bond that generates national duties and rights, given that it binds it to a state.[59] It refers to the right to exercise political prerogatives granted by a state. The definitions of citizenship and nationality often merge and cause confusion because of divergent legal regimes, ethnic cultural nuances, and differences between domestic and international law. The law of the European Union (EU) can be used to clarify the fundamental difference between nationality and citizenship. Someone from an EU Member State is granted the legal status of a European citizen and is also recognized by the other Member States and by the international community. This individual holds rights and obligations arising from community law to the detriment of domestic legislation. In this case, the citizenship is not granted by a nation state and does not change his or her nationality. As a result, the individual can exercise certain rights and duties in another Member State without being a national.[60]

There are several definitions of nationality and citizenship which are mixed and confused in different states and in accordance with domestic legislations. Therefore, for the purposes of this work, the most relevant definition is one that establishes that nationality is the legal relationship between individual and states as recognized by international community.[61] It is the result of certain events such as descent, birth, and adoption according to the rules of each country. Also relevant to the plight of the Rohingya is the definition of national identity that can be synthesized belonging to a particular nation. It means that the person shares historical and cultural bonds with a group of people. Citizenship is the set of legal rights and duties of individuals that is linked to nationality.[62]

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[55] Convention on the Reduction of Statelessness (New York, 30 August 1961) (United Nations, Treaty Series, vol 989, p 175)
[56] 'The Universal Declaration of Human Rights' (n 14).
[57] Convention on the Rights of the Child (General Assembly resolution 44/25 of 20 November 1989)
[58] Natalie Brinham, ''Genocide cards': Rohingya refugees on why they risked their lives to refuse ID cards' (*Open Democracy,* 21 October 2018) <https://www.opendemocracy.net/en/genocide-cards-why-rohingya-refugees-are-resisting-id-cards/> accessed 3 December 2018
[58] Stanford Encyclopedia of Philosophy, 'Citizenship' (n 43)
[59] Manby, *Nationality, Migration and Statelessness in West Africa* (n 19)
[61] Baubӧck and others (eds), *Acquisition and Loss of Nationality.* (n 36)
[62] Ibid

According to these two concepts, it is possible to affirm that nationality is therefore one of the steps to give an individual access to fundamental rights, while citizenship can guarantee an individual to be represented and protected by a state to be able to exercise their civil, political, and social rights. This is where the link between citizenship, nationality, identity and identification is found. For instance, for an individual to have access to education, the formal labour market, basic health services, marriage rights, voting rights, and the legal right to travel domestically and internationally, it is crucial that he or she is identified.[63] An identification document allows a person to be recognized by others as a citizen, as a member of a society, and as an autonomous individual in a democracy. Thus, it is vital that people have identity documents in order to migrate legally, document life events, protect their individual rights, and access civil, political and social rights.[64] For the Rohingya, their statelessness along with the fact that they do not have documents turns them into people without rights.

It is also important for a state wishing to guarantee its democracy that its people can exercise their rights and duties. Thus, in the same way that identification is significant for an individual, the same can be said for a state. The very fabric of democracy is compromised if part of the population cannot vote merely for lacking an identification document. A recent study from the University of California, San Diego, that analysed the 2008 and 2012 election attendance in the United States found that the difference between the white and non-white attendance was higher in states with stricter voter ID requirements. The researchers concluded that this factor could significantly alter the outcome of an election.[65] This is particularly true in the country that calls itself the guardian of democracy and with enough wealth to invest in technology to facilitate individuals' access to an appropriate identification document. It is not difficult to infer that the scenario regarding discrimination is even worse for developing countries or those nations that continue to face authoritarian regimes that flagrantly undermine the rights of their citizens, as has happened with the Rohingya population in Myanmar. When civil and political rights, such as the right to vote, are not granted to an individual, democracy is weakened.

Furthermore, identification documents can potentially be misused by a government to control citizens' movements, to shape behavioural profiles, and to strengthen discriminatory processes against those belonging to a specific group. Compulsory identification cards that bring together a citizen's different personal data have been put into practice in several countries. In the UK, for example, the government has been trying to implement them since at least 2003. The British government has argued that the cards are necessary for the security of society and for the fight against terrorism. In 2006, the Identity Cards Act 2006 (c 15) ensured the implementation of compulsory ID cards;[66] in January 2011, however, the cards were

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[63] Clark and others, *Digital Identity: Towards Shared Principles for Public and Private Sector Cooperation* (n 11)

[64] Manby, *Nationality, Migration and Statelessness in West Africa* (n 19)

[65] Christopher Ingraham, 'New evidence that voter ID laws 'skew democracy' in favor of white Republicans' (*The Washington Post,* 4 February 2016) <https://www.washingtonpost.com/news/wonk/wp/2016/02/04/new-evidence-that-voter-id-laws-skew-democracy-in-favor-of-white-republicans/> accessed 28 January 2019

[66] Identity Cards Act 2006 c 15

considered invalid. The British, either by opposition from certain political parties who consider these identification documents an affront to civil liberties, or by rejection through public consultation, acted against the use of identification cards. Nevertheless, national cards for immigrants from countries outside the European Union continued to be issued, illustrating the government's choice to retain information about some of the residents.[67] Although an identification document may have its purpose diverted by governments as in the Rohingya crisis, its primary purpose, when used properly, is to serve as an instrument through which an individual can be identified, be considered a full member of a community, and have his or her citizenship recognized.

2.3 The need for an identification document to access civil, political, and social rights

Access to identification documents is a crucial step for an individual to access civil, political and social rights that come with citizenship. According to Marshall, citizenship corresponds to the conquest of three rights: civil, political and social.[68] Civil rights are the rights related to individual freedoms and include the right to equality by law, the right to a fair trial, the right to come and go, and the right to freedom of opinion. Political rights are rights related to participation in the exercise of political power, such as the right to vote and to be elected, to hold political demonstrations, and to establish political parties. Social rights are those related to the basic needs of humans, for instance, the right to have education. Civil, political, and social rights are thus those rights obtained by reason of citizenship in a nation or state and safeguard the legal order and the freedom of an individual within a country.

Civil, political, and social rights are not equitable to human rights. The ethical and political principles pertaining to human rights should always be valid for all people. There is not one definition or legal framework of civil, political and social rights; rather, these rights should be seen as an agreement between a nation, its states, and its citizens and will vary according to several factors such as culture, traditions, and legal system. This scenario creates a difficulty in establishing what these rights mean in different countries and what exactly the lack of identification entails. Although there is no homogeneity in relation to what these rights represent in all the countries, it is certain that the lack of identification can aggravate the difficulty in accessing them. Understanding the importance and need for legal identification, the United Nations (UN) has been including it as a development goal for the 2030 Agenda for Sustainable Development.

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[67] 'Timeline: ID cards' (*BBC*, 27 May 2010) <https://www.bbc.com/news/10164331> accessed 21 June 2019
[68] Thomas Humphrey Marshall, 'The Early Impact of Citizenship on Social Class' in Thomas Humphrey Marshall (ed), *Citizenship and social class, and other essays* (CUP 1950)

2.4 Legal identity for everybody? One of the Sustainable Development Goals (SDGs)

The SDGs are the largest initiative that seeks to solve the absence of "legal identity". They were formulated for the 2030 Agenda for Sustainable Development of the United Nations and include 17 objectives. The SDGs are the successors to the eight Millennium Development Goals (MDGs) established in the United Nations Conference on Sustainable Development in Rio in 2002. The 17 goals created in 2015 include a total of 169 associated goals, and the nations that joined will have to work to meet them in 15 years.[69] The main goals of high-quality education, gender equality, accessible and clean energy, clean water and sanitation, less inequality, peace, justice, and strong institutions.

Target 16.9 of the SDGs aims to provide legal identity for all, including birth registration, by 2030.[70] Although this target can be seen as a first step, it is unlikely that it will contribute to the further development of an efficient formal identification for all. First, the target does not clarify what is understood under "legal identity". [71] In other words, the target does not clarify if identity encompasses the legal status of an individual, including the indication of a refugee and/or the nationality and citizenship. Furthermore, the target does not mention the steps that countries must take to comply.[72] Considering that the states participating in the preparation of the SDGs do not assume a legal commitment regarding the achievement of these goals, it is difficult to understand how the initiative will unfold in the years to come and how its efficacy over time will be measured.[73] Second, the observation of the Agenda 2030 shows that legal identity is directly related to the objectives contained in other SDGs, such as obtaining formal employment and taking part in government social protection programs. These objectives indicate the need for legal identity, which demonstrates that target 16.9 is more likely to be a way to achieve other provisions rather than finalizing formal identification requirements.[74]

Finally, the political decision to extend the 2030 Agenda to include more universal objectives and to provide a greater emphasis on economic development than on social development denotes a setback in human rights. The 2030 Agenda treats economic growth as a solution to the problems generated by social inequalities. For example, objective 8.1 states: "Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 per cent gross domestic product growth per annum in the least developed countries".[75] This is somewhat illusory considering the UN projection that approximately 1

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[69] Council of the European Union, 2030 Agenda for Sustainable Development: establishment and mandate of a dedicated Working Party [2017] OJ 14809/17

[70] Sustainable Development Goals (General Assembly resolution A/RES/70/1 25 September 2015) 16.9

[71] Guy J. Abel and others, 'Meeting the Sustainable Development Goals leads to lower world population growth' (2016) 113 PNAS 14294

[72] Alan Gelb and Bronwen Manby, 'Has Development Converged with Human Rights? Implications for the Legal Identity SDG' (*Center for Global Development,* 3 November 2016) <https://www.cgdev.org/blog/has-development-converged-human-rights-implications-legal-identity-sdg> accessed 4 January 2019

[73] Stanford Encyclopedia of Philosophy, 'Citizenship' (n 43)

[74] Gelb and Manby, 'Has Development Converged with Human Rights?' (n 55)

[75] Sustainable Development Goals (General Assembly resolution A/RES/70/1 25 September 2015) 8.1

billion people, mostly in underdeveloped and developing countries, do not even have legal identity documents. To establish economic growth, which basically comes from private initiative, as a solution to social problems represents a conflicting vision. For example, several SDG objectives have as a requisite that legal identity must be provided by the states even though a substantial number of people do not have a legal identity document. This situation fails to address issues of nationality, statelessness and citizenship, as in the case of the Rohingya. For instance, a local program was created in Myanmar to meet the SDGs, but there is no mention of goal 16.9 in it.[76] Therefore, even if the objectives are more economic than social in nature, , in the places with the biggest concentration of Rohingya,[77] such as Myanmar and Bangladesh, the SDGs have a high chance of failure. How can these countries possibly reach other targets if a substantial portion of their population exists in a stateless condition, without a formal identification (legal identity) and without rights?

2.5 Conclusion

In this chapter, the purpose of identifying an individual in relation to civil, political, and social rights was discussed. Also covered was the importance of identity, formal identification, nationality, and citizenship to individuals and how these fit into the Rohingya's history.

As noted in this chapter, the possession of an identification document does not imply that a person can be fully identified. Many documents issued are inconclusive because they are not capable of proving the identity of an individual or because they provide inaccurate information, as occurs with Rohingya if identified as Bengalis. Moreover, the possession of a document does not necessarily mean that an individual can exercise his or her civil, political, and social rights. In some cases, the documents allow the acquisition of basic services. This cannot, however, be understood as access to civil, political, and social rights that are part of a much broader universe of rights. Giving individuals identification that allows them to access a bank account or to be treated in a hospital does not guarantee that they are exercising their rights up to the maximum limit. Full enjoyment of these rights is closely linked to the possession of a nationality and citizenship, which allow the individual to be part of a nation and establish a legal bond between the individual, his or her state, and the rights and duties as a result of this connection. Also crucial is the need for a democratic state with full rights so that the civil, political, and social rights of its citizens can be recognized.

Apart from the framework mentioned above, the identification document needs to be used in favour of individuals. Such a document can serve both as an instrument to facilitate access to such rights as well as an instrument of discrimination. If effective, identification documents can become tools for access to other rights as appears to be the goal of Agenda 2030 SDGs. On the other hand, if they omit information or bring incorrect information, as the Burmese government has been trying to do with the Rohingya, it can formalize their

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[76] Ministry of Planning and Finance, *Myanmar Sustainable Development Plan (2018-2030)* (The Government of the Republic of the Union of Myanmar 2008)

[77] UN High Commissioner for Refugees, *Culture, Context and Mental Health of Rohingya Refugees* (n 6)

statelessness and exclude any chance of accessing the rights, as will be discussed in the next chapter.

Chapter 3. (Lack of) identification documents for the Rohingya and the absence of civil, political, and social rights

3.1 Introduction

In the previous chapter, the right to formal identification was discussed in relation to the exercise of civil, political, and social rights. The concepts of identity, identification, nationality, citizenship, and how they connect with the Rohingya crisis and the associated aggravation with the increase of the number of refugees in recent years was also addressed. The chapter also brought the contradiction in the SDGs launched by the United Nations; whose purpose is precisely to provide legal identity and their lack of timely progress.

Considering that an identification document represents a tool or a part of the process of access to rights for a vulnerable population, its supply becomes even more urgent and delicate. According to the "Global Trends" report issued by the United Nations High Commissioner for Refugees (UNHCR) in 2016, one in every 113 people on the planet is considered a refugee.[78] In the refugee camp of Cox's Bazar, the largest in Bangladesh,[79] more than 900,000 Rohingya refugees crowded waiting for humanitarian aid able to gain, among other things, access to formal identification.

This chapter will discuss the problems of the persecuted Rohingya population and how they are affected by (lack of) identification documents. It will illuminate the facts and circumstances that led them to become refugees. The intrinsic relation between how these people were purposely deprived of their legal status as citizens, the absence of rights today, and the lack of adequate documents, will be sources of subsequent discussion. Therefore, in Section 3.2, the case of the Rohingya refugees is presented to clarify the problems that exist when refugees have no access to formal identification. Thereafter, Section 3.3 outlines how the rights of which refugees are deprived relate to the absence of identification in a broader sense.

3.2 Rohingya and the (lack of) identification

In this section the inadequate or absent identification documents of the Rohingya population will be addressed. The identification cards that are imposed on and/or confiscated from the Rohingya population over many years have a direct relation to the lack of rights suffered by them, because the shortage of rights are the product of discriminatory laws and peremptory governments that have the desire to promote ethnic cleansing. Over the years the different types of ID cards have been an instrument of usurpation of the citizenship of the

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[78] Charlotte Edmond, 'The number of displaced people in the world just hit a record high' (*World Economic Forum,* 20 June 2017) <https://www.weforum.org/agenda/2017/06/there-are-now-more-refugees-than-the-entire-population-of-the-uk/> accessed 8 February 2019
[79] 'United Nations seeks US$920 million for Rohingya humanitarian crisis in 2019' (*UNHCR,* 15 February 2019) <https://www.unhcr.org/news/press/2019/2/5c667ecf4/united-nations-seeks-us920-million-rohingya-humanitarian-crisis-2019.html> accessed 18 February 2019

Rohingya population and, consequently, of their civil, political, and social rights as will be seen below.[80]

3.2.1. Genocide cards

After independence was achieved in 1948, Myanmar lived by a civil government for some years and was formed by three different inhabitants: indigenous, mixed, and foreign populations.[81] In 1962 a military government was established that officially lasted until 2011. Since 1947, the country has had three different Constitutions. The 1947 Constitution[82] was associated with The Union Citizenship Act (UCA) of 1948[83] and defined the rules to be considered a citizen of Myanmar. One of the provisions of the 1947 Constitution states that citizenship was guaranteed to those who belonged to the indigenous races of Burma.[84] While the UCA determined these indigenous groups, it blocked those racial groups who were in the country before 1824, the date of the First Anglo-Birman War.[85] The interpretation given to these two legal documents was restrictive and excluded the Rohingya, who in turn argued that they have similar characteristics to various Myanmar ethnic groups and should have the same rights. Again, the concept of identity as a comparison of one individual (or group) with respect to another appears in the history of that population.[86]

In the 1950s, considering the previous law, National Registration Cards (NRCs) were issued as proof of nationality/citizenship.[87] With the issuance of these cards, part of the Rohingya was officially deprived of their citizenship. By 1970,to the Muslims of Northern Arakan, the region with the highest concentration of Rohingya, NRCs were no longer issued, and in some cases the cards that already existed, were confiscated.[88] Gradually the Rohingya lost what was the ultimate proof of their nationality and the instrument that somehow conferred rights.

In 1989, a new citizenship regime was put into place as the result of the new citizenship legislation created in 1982.[89] In this law, there are three main criteria that, together or mixed, grant the right to Burmese citizenship. First, the individual needed to be part of one of the national races recognized by the government, such as the Rakhine for example. Second, people needed to be able to prove the presence of their ancestors in the territory before 1823, prior to the British occupation. Finally, the individual should be able to prove that his parents entered and lived in Burma before independence in 1948. In addition to these factors, the individual

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[80] Leider, 'Rohingya' (n 2)
[81] Parashar and Alam, 'The National Laws of Myanmar' (n 3)
[82] The Constitution of the Union of Burma, 24 September 1947.
[83] Union Citizenship Act, 1948 (Act No. LXVI of 1948.)
[84] Parashar and Alam, 'The National Laws of Myanmar' (n 3)
[85] Leider, 'Rohingya' (n 2)
[86] Parashar and Alam, 'The National Laws of Myanmar' (n 3)
[87] Advisory Commission on Rakhine State, *Towards a peaceful, fair and prosperous future for the people of rakhine* (Advisory Commission on Rakhine State 2017)
[88] Leider (n 3).
[89] Burma Citizenship Law (Pyithu Hluttaw Law No 4 of 1982)

required, in accordance with Section 44 of the Law, to be able to speak one of the national languages, among which the Rohingya dialect was not included. The Rohingyas claim that their ancestors occupied the territory long before any of the governments stipulated dates, but unfortunately they were not able to prove it.[90] Under this new regime, people had to give up previous identification documents to obtain new ones. The Rohingya were assigned specific white cards, called Temporary Registration Cards (TRCs), which did not guarantee them citizenship and full rights and were used by the government to control them.[91] During this situation of deprivation of documents and nationality, in the early 1990s the government intensified the presence of the Army in the border region of Northern Arakan. Roughly 250,000 Rohingya that refused to accept the white cards left the country at this time because of the surveillance, discrimination, and violence. In a process that lasted many years, the United Nations worked to repatriate them, but the government made the identification of the Rohingya difficult. Once again, they were denied trusted documents, nationality/citizenship, and rights.

In 2010, the government decided to issue other cards to the Rohingya, which brought information from the Burmese Muslims. The measure was rejected by the Rohingya, who pointed out that it did not include correct details surrounding their ethnicity and that the cards were an initiative aimed at securing 200,000 votes in the upcoming elections that were to take place. The TRCs were cancelled in February 2015 by the president Thein Sein, and new cards were issued in 2015 for those who agreed not to be identified as Rohingya.[92] The authorities clearly employed an arbitrary and segregated manoeuvre for this specific population. The lack of documents and the absence of recognition of nationality and citizenship have led the Rohingya to social exclusion. They live in an abyss of rights, without a homeland or recognition of ethnicity or protection in whatever country they live.[93]

3.2.2. The lack of rights of the Rohingya population

During all these years of issuing, reissuing, confiscating, and banning documents, the Rohingya have been facing a series of civil, political, and social deprivations. The most fatal of these events became known after the crisis of 2016, when a group called ARSA attacked Buddhist villages and launched massive military operations in Northern Arakan. As an answer, the Army promoted a systematic destruction of hundreds of villages, which intensified the Rohingya's exit from Myanmar.[94] The violence suffered by them was innumerable: women were continually subjected to sexual violence; people were forced to work for the government; others were held in the internal encampments; and properties were confiscated, as will be explained below. Even after leaving Myanmar in the refugee camps, the Rohingya still suffer from the absence of formal documentation and, above all, their rights. They remain unable to

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[90] Leider, 'Rohingya' (n 2)
[91] Advisory Commission on Rakhine State, *Towards a peaceful, fair and prosperous future for the people of rakhine* (n 69)
[92] Leider, 'Rohingya' (n 2)
[93] Brinham, 'Genocide cards' (n 42)
[94] Human Rights Council, *Report of the independent international fact-finding mission on Myanmar: Thirty-ninth session* (United Nations 2018)

access education, housing, basic services, and entrance into the formal labour market. The Rohingya cannot vote or create political parties, nor can they attend a university. They count on humanitarian aid to have the bare minimum necessary to survive, as will be explained below.

(i) Sexual violence against woman

Women, pregnant women, adolescents ,and even children were victims of sexual violence by Myanmar's Army when instigating a village attack. Without documents and rights, they fled towards refugee camps outside the country. Ultimately, sexual violence is part of a strategy to massively humiliate, terrorize, and punish the Rohingya community. As such, they are forced to leave and give up fighting for their rights.[95]

(ii) Forced labour and restrictions within internal encampments

With the presence of the Burmese Armed Forces in Northern Arakan, many Rohingya are forced to work for the Army. During the day the Rohingya are forced to work in the fields and farms and at night they are obligated to stay up and keep watch. They do not receive salary in exchange for work and do not even have the option to refuse it. Abuses were reported on more than one occasion, but the Army has not been punished.[96]

(iii) Property confiscation

The presence of the Burmese Army among this unprotected population culminated in confiscations of land for military camps. Attacks on villages destroyed entire plantations that were left behind by the Rohingya because they fled when trying to escape from violence. Some Rohingya do not have identification documents and therefore cannot prove the ownership of the land. Others, despite having identification and land documents, are not recognized by the state as citizens and therefore have not recognized their right to property. Authorities make plans to sell the land left behind by the Rohingya. Even in cases of repatriation, the Burmese authorities intend to send them to villages other than their former home.[97]

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[95] Associated Press and . Reuters, 'Many Rohingya subjected to 'brutal sexual assault' by Myanmar forces – UN' (*The Guardian,* 15 April 2018) <https://www.theguardian.com/world/2018/apr/15/many-rohingya-subjected-to-brutal-sexual-assault-by-myanmar-forces-un> accessed 4 April 2019

[96] Arifa, 'Military Forces Rohingya to Farm during Day and Guard Villages at Night' (*Rohingya Vision,* 10 September 2018) <http://www.rvisiontv.com/military-forced-rohingya-to-farm-during-day-and-guard-villages-at-night/> accessed 3 April 2019

[97] Simon Lewis, Thu Thu Aung and Kyaw Soe Oo, 'Exclusive: Returning Rohingya may lose land, crops under Myanmar plans' (*Reuters,* 22 October 2017) <https://www.reuters.com/article/us-myanmar-rohingya-repatriation-exclusi/exclusive-returning-rohingya-may-lose-land-crops-under-myanmar-plans-idUSKBN1CR0AS> accessed 4 April 2019

(iv) Lack of access to education for children

Another right taken from the Rohingya is access to education. In Myanmar, many Rohingya children could not go to school either because of lack of documents or because they lived in confinement in a certain locality where there was no school. In Bangladesh the situation is no different. The Rohingya, as refugees and stateless people, are not entitled to attend an official school. The little education that is offered comes through learning centres run by non-governmental organizations and humanitarian aid agencies. The lack of access to education has a double effect. In the short term the right to learning vanishes. Over time, it also eliminates training as a citizen because it curtails the right to understand that one has rights and eliminates the smallest chances of learning to fight for civil, political and social rights.[98]

(v) Limited access to healthcare

Accessing healthcare in Myanmar was extremely precarious. In 2013, a survey showed that in the state of Rakhine, for the stateless there was one doctor for each group of 158,000 people. In contrast, for Buddhist citizens in the same region, the estimate was one physician for every 681 people. [99] In addition, there are indications that the reproductive right of this population was being curtailed by the government, reinforcing once again the attempt of ethnic cleansing. In refugee camps outside Myanmar despite efforts by humanitarian agencies, the situation is extremely precarious. There are outbreaks of diseases such as cholera due to lack of combined sanitation and poor diet. A high rate of women are victims of sexual violence, while many pregnant women do not have adequate care and are subjected to overcrowding.

(vi) Access to formal work

There are a limited number of jobs in refugee camps. When they exist, the jobs are informal and the priority when filling these positions is to employ men. Certain refugees can generate income by selling fruits and vegetables, though refugees generally cannot leave the camps and therefore have no options. Although there are women that can leave the camps to work for long hours, they do so in exchange for very little.[100]

Moreover, the Rohingya do not decide where they are moving. An example of this is the plan organized by the government of Bangladesh to relocate these peoples to an uninhabited island, Bhasan Char (formerly Thengar Char), that is vulnerable to cyclones and floods while also not having adequate infrastructure.[101] The bungalow government has already cited the fact

[98] Urvashi Sarkar, 'With no formal schools or jobs, young Rohingya left in lurch' (*Al Jazeera,* 13 April 2018)
[99] Mike Ives, 'Rohingya Face Health Care Bias in Parts of Asia, Study Finds' (*The New York Times,* 5 December 2018) <https://www.nytimes.com/2016/12/05/world/asia/rohingya-myanmar-health-care.html> accessed 1 April 2019
[100] Sarkar, 'With no formal schools or jobs, young Rohingya left in lurch' (n 80)
[101] Hannah Ellis-Petersen, 'Footage shows 'prison-like units' built for Rohingya on Bangladesh island' (*The Guardian,* 29 November 2018) <https://www.theguardian.com/world/2018/nov/29/footage-shows-prison-like-units-built-for-rohingya-on-bangladesh-island> accessed 23 February 2019

that the Cox Bazar camp does not support the current number of refugees within and that if they refugees move spontaneously; they will be subject to forced relocation. The Rohingya, without adequate documents to prove their citizenship and guarantee their civil, political, and social rights, are forced to move to a distant region in Bangladesh where it is extremely difficult to build a promising life.

3.2.3 Route to citizenship or déjà vu?

In Myanmar, the government did not give up on the idea of identification cards. Instead, the remaining Rohingya people have been summoned by the authorities to be issued identity cards like those that were used in the past.[102] These identity cards (which were frequently withdrawn, together with the rights and part of the identities of their holders), once again, do not establish the Rohingya nationality. The Rohingya would be classified as foreigners who must apply to acquire citizenship under the same conditions as before. If they do not accept, they will not have any guaranteed minimum rights, such as registering their own children. They are already born stateless in contravention of international instruments, such as the Convention on the Rights of Children. At the same time, across the border a repatriation agreement was recently signed between the UNHCR, the United Nations Development Program, and the Myanmar government that resulted in pressures on the Rohingya to accept a biometric card proposed by UNHCR. [103] The cards, however, do not address the issue of Rohingya citizenship. Returning to Myanmar without formal recognition of their citizenship and ethnicity means returning to a life of oppression, in fields of internal displacement, or being prisoners in their own country. In Myanmar, they will have to re-submit to identification cards if they wish to have any recognized rights, but that does not mean their citizenship will be acknowledged.[104] The Rohingya are reluctant to accept this "new" identification card.

Their reluctance seems to be based on the following reasons. First, they fear being repatriated without adequate conditions. Second, they wish to have on their cards the legal status of refugees and the declaration of the Rohingya ethnicity because they understand that public recognition of the ethnicity would help guarantee certain rights and protect them from abuse in Myanmar. The Bengali government is reluctant to accept their refugee status and fears that the process will continue, and the UNHCR has avoided the issue because it is contrary to the agency practice of not establishing ethnicity in their documents. UNHCR cards will be provisional cards that have allowed the Myanmar government to issue new cards after repatriation that require Rohingya citizenship to be verified and approved by the government. This is already a contradiction , since the same government has been systematically denying rights to this population and removing traces of their citizenship.[105] The problems that

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[102] Brinham, 'Genocide cards' (n 42)
[103] Shabia Mantoo, Joseph Tripura and Charlie Yaxley, 'Joint Bangladesh/UNHCR verification of Rohingya refugees gets underway' (*UNHCR,* 6 July 2018)
<https://www.unhcr.org/news/briefing/2018/7/5b3f2794ae/joint-bangladeshunhcr-verification-rohingya-refugees-gets-underway.html> accessed 7 January 2019
[104] Brinham, 'Genocide cards' (n 42)
[105] Ibid

Rohingya people face are complex and systemic in a legal and political sense. The problems related to identification and recognition of citizenship should be a critical priority After two failed attempts to be repatriated with UNHCR participation, what the Rohingya need now is a reliable, transparent, and voluntary source of recognition of their citizenship.

3.3 Lack of identity for refugees and the rights of which they are deprived

Although the Rohingya are in a very specific situation because of their statelessness, several privations to which they are subjected may also be recognized in other refugee populations that lack formal documentation. In case the refugee does not have access to documentation to formally identify oneself, it is hard to claim his or her rights in practice. The lack of identification can cause problems and suppresses rights in a variety of ways. In general, the refugee may have restricted access to services or restricted movement; they may be arrested for lack of documents; they may become stateless; they may have their refugee application rejected; or they may find tremendous difficulty in getting housing or being repatriated. The main issues that arise for refugees when they do not have access to formal identification are:

(i)   Access to services

Undocumented refugees are unlikely to be eligible to receive services at public health facilities of the country they are located at and are restricted to healthcare provided by humanitarian agents. The same scenario applies to education. As a child cannot be identified, he or she cannot be enrolled in a school – in turn, refugees who cannot register their children may not even be able to prove that the children are theirs;[106]

(ii)   Right to freedom of movement

In general, refugees without identification documents have difficulties in transit in the country where they reside. There is always the fear that they may be transferred to other camps, be detained or even sent back;

(iii)   Detention

A person who cannot prove his/her identity to agents of the State, due to lack of an identity document can be detained;[107]

(iv)   Stateless people

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[106] Rebecca Dowd, *Trapped in Transit: The Plight and Human Rights of Stranded Migrants - New Issues in Refugee Research - Research Paper No. 156* (UNHCR 2008)

[107] Manby, *Identification in the Context of Forced Displacement* (n 15)

Many refugees without documents are unable to prove their identity and because of that they become stateless people and cannot request protection and assistance from the authorities of their home countries. In these cases, the refugees will be without the protection of the host country and without international protection;[108] and

(v)   Housing

Accommodations can also be a very complicated situation. Even if a refugee has some financial resources that allows him or her to purchase or rent a home, without documents it becomes legally impossible and often forces the refugee to remain in refugee camps. With this, they cannot move outside the camps because they are not lawfully registered.

The Repatriation State's obligation to readmit its nationals only applies to those who have documentation to prove their nationality. A state of origin that already failed to support the individual, however, will not be able to provide documentation and enables return.[109] Individuals without identification cannot exercise their civil, political, and social rights, such as voting, being voted on, being elected, or accessing public education or public projects of social inclusion because they do not legally exist in the sense of the law. The nonexistence of identification also prevents the government from better knowing and quantifying its population for the planning and execution of public policy Therefore, they remain invisible to the government. To solve this issue humanitarian agents such as UNHCR and NGOs seemingly are at the forefront in providing identification for refugees. It is therefore necessary to understand what legal set of rules should be applied in this situation to the agents who are conducting identification processes.

3.4 Rules and regulations for technology use for humanitarian actors

Before identification using blockchain-based solutions regarding the Rohingya refugees can be analysed in the next chapter, it should be made clear what rules and regulations are involved in this scenario. Until today, there have been no specific international rules applicable to refugees when it comes to the use of technology to formalize legal status, nationality, or citizenship in the absence of the protection of their country of origin. Therefore, the applicable rules will be the same applied to refugees in general. Humanitarian rules serve as an international legal framework that is not only responsible for guidelines on how to address challenging situations, but also acts as a potential mechanism for reaching, defending, and protecting forcibly displaced persons. They include international human right law, international criminal law, international humanitarian law, international disaster response rules, principles, and laws, and, lastly, international refugee law.[110] For instance, arguments and negotiations for access to a place of armed conflict can be strengthened by reference to legal commitments

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[108] World Bank, *Principles on identification for sustainable development: toward the digital age* (World Bank 2018)

[109] Manby, *Identification in the Context of Forced Displacement* (n 15)

[110] United Nations, *International Legal Frameworks for Humanitarian Advocacy* (United Nations 2011)

already ratified between the parties involved as well as by the general principles of humanitarian law.

International humanitarian law is the collection of international laws that seek to ease human misery and promote concern for humanity. These laws grant humanitarian actors a legal status for aid and care. The privileges and immunities of officials of international organisations are granted through instruments that include the UN Convention on Privileges and Immunities of 1946[111] and the Convention on the Privileges and Immunities of the Specialized Agencies of the United Nations.[112] The Geneva Conventions and Protocols are the cornerstone of international humanitarian law and have, as one of their objectives, the protection of civilians during times of war. They contemplate and aim to guarantee: i) the protection of victims of international armed conflicts, characterizing them in order to be differentiated from other victims of war; and ii) recognition and protection of victims of non-international armed conflicts (civil wars). International humanitarian law applies to all those involved in an armed conflict. Under the international scenario, states must comply with it, and in an internal local scenario, the country's government and possibly the individuals involved must also comply.[113] International refugee law can also be applicable in combination with other laws, such as international criminal law and human rights law to create, from a legal point of view, more comprehensive protection and assistance.[114] According to Article 5 of the Convention on Refugees,[115] rights granted to refugees via other instruments can be applied concomitantly with the Convention itself. The legal status of refugees can be determined by governments or the UNHCR through an administrative or legal process. The States, which are party to the 1951 Refugee Convention, have the initial responsibility of conducting this process. Based on the absence of interest of some countries in receiving such individuals or the lack of an adequate procedure for taking them in, however, the UNHCR has played a decisive role. There are roughly 20 countries where the process is being carried out by UNHCR in concert with local governments. The agency also created the "Procedural Standards for RSD Under UNHCR's Mandate",[116] a handbook on how states should perform procedures seeking to grant refugee status and assistance to such individuals. With regards to the Rohingya people, though, not many of the international laws and regulations are applicable.

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[111] Convention on the Privileges and Immunities of the United Nations (New York, 13 February 1946) (United Nations, Treaty Series , vol 1, p 15, and vol 90, p 327)

[112] 'Convention on the Privileges and Immunities of the Specialized Agencies' <http://portal.unesco.org/en/ev.php-URL_ID=48887&URL_DO=DO_TOPIC&URL_SECTION=201.html> accessed 30 April 2019.

[113] Michael Bothe, 'International Human Rights and Humanitarian Law. By Réne Provost. Cambridge, New York: Cambridge University Press, 2002.' (2004) 98 AJIL 383

[114] Rachel Brett and Eve Lester, 'Refugee law and international humanitarian law: parallels, lessons and looking ahead' (2002) 23 IRRD 713

[115] Convention relating to the Status of Refugees (General Assembly resolution 429 (V) of 14 December 1950) Art 5

[116] United Nations High Commissioner for Refugees, *Procedural Standards for Refugee Status Determination under UNHCR's Mandate* (UNHCR 2019)

Bangladesh, where a large portion of the Rohingya refugees are situated, has not ratified the 1951 Refugee Convention nor the two Conventions on Statelessness.[117] The country does not have national legislation for granting legal refugee status, which means that the government of Bangladesh has no legal obligation to initiate the process of granting legal status to refugees.[118] For the Rohingya, the only national legislation applicable by the government of Bangladesh is that which deals with the entry and residence of foreigners. Therefore, UNHCR is liable for granting legal status of refugees to the Rohingya population and is also obliged to issue pertinent documents to them. In Myanmar, the Rohingya are considered internally displaced persons (IDPs) as they do not cross the border. IDPs do not have legal status to receive protection and assistance because of the deficient legal structure. As an outlet, they rely on the governments of their own countries that are frequently responsible for their displacement. As is happening with the Rohingya, governments that are responsible for the internal displacement of their citizens because of persecution use their sovereignty to try to hide the violations they are committing. In 1998, the Guiding Principles on Internal Displacement, an important non-legal document, was drafted, embracing the principles of international human rights and humanitarian law. In addition, the instrument establishes how actors involved in providing assistance and protection should act, and it also offers a definition of IDPs.[119]

So, overall, when dealing with refugees and IDPs, there are three ways to provide care and protection. For one, the country of origin can take charge when there is internal displacement. Next, the host country should apply its domestic laws and international conventions and treaties that were previously ratified. Finally, humanitarian actors, such as UNHCR, should use a humanitarian framework for issues involving refugees, including the employment of new technologies and means of identification in order to offer assistance. However, what measures are available when technologies, including data collection, are applied to this population have not been discussed in the literature as of yet. Furthermore, it is at this point unclear what measures are available to such populations when they use certain technologies.

3.5 Conclusion

It is patent that the absence of an identification document aggravates cultural, economic, and social barriers as well as access to basic services. The lack of documents places the Rohingya in a situation of even greater vulnerability and difficulty in accessing their rights. The oppression they suffer has a common denominator, though, which is the lack of civil, political, and/or social rights granted through citizenship and instrumentalized with the help of identification documents. This failure to recognize citizenship exposes them even more to structures of power based on ethnicity or religion that has the premise of discrimination.

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[117] Convention on the Reduction of Statelessness (n 39)

[118] Pia Prytz Phiri, 'Rohingyas and refugee status in Bangladesh' (2008) 30 FMR 34

[119] Monika Mandal, 'Guiding Principles on Internal Displacement' in Monika Mandal (ed), *The Rise of Revolution: Internal Displacement in Contemporary Nepal* (Routlage 2017) 29

Therefore, while on one hand an identification document is a first step in a process of recognition of nationality and citizenship, on the other hand none of these factors alone can guarantee civil, political, and social rights. When a refugee leaves his or her country of origin it is precisely because he or she has already lost his or her rights, regardless of whether he or she has an identification document.[120] In addition, although there is a body of law applicable to humanitarian actors as well as to refugees and IDPs, laws concerning the use of technology for identification are vague and will likely remain so until is further developed.

Hence, refugees require a, document that can grant them access to assistance and effective services, legal and physical protection, economic inclusion, through nationality, and citizenship. They also need transparency, security, control of their data, and privacy; otherwise, identification documents can serve as a tool to reinforce surveillance, discrimination, and power imbalances between refugees and governments, tech companies, and other actors. Refugees need the certainty that their documents and all information linked to them cannot be used without distinction according to the wishes of those in power.

A new range of possibilities with technology has been applied in innovative ways by humanitarian actors and NGOs to solve identification issues. One of those solutions is the use of blockchain technology to solve the Rohingya crisis, including verifying ethnicity.[121] According to the proponents, the blockchain's resources could guarantee the Rohingya refugees, who had to leave all their documents and belongings behind, a digital identity that could be used as any other physical form of identification, would be adequately safe to protect them from intervention of third parties, and it would be adequately effective for them to access necessary services and economic inclusion.

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[120] Manby, *Identification in the Context of Forced Displacement* (n 15)
[121] Thayer and Hern, 'Rohingya turn to blockchain to solve identity crisis' (n 16)

Chapter 4. Identification of refugees by a blockchain-based application

4.1 Introduction

The previous chapter discussed how the Rohingya came to the degrading situation in which they now live as stateless refugees. It highlighted how their history of discrimination and deprivation of rights can be linked to the lack of documents or inadequate documents proving their nationality and citizenship. In addition, it was possible to observe the similarities of their problems with other refugees and the importance of a formal identification for both in order to gain access to those rights. These problems noted in this previous chapter have already been identified by various actors in the international arena who are beginning to propose solutions to solve the problems of refugees. Specifically, the Rohingya have been the target of an NGO called The Rohingya Project, which proposes blockchain technology as the ideal tool to solve their difficulties.[122]

This chapter will evaluate blockchain technology in light of the Rohingya refugees. This technology will be explained in the context of its general applications as well as in relation to refugees. In addition, the reasons why this tool is proposed as a possible solution for the Rohingya situation will be evaluated. Section 4.2 will consist of an overview of blockchain technology in relation to the Rohingya. Next, Section 4.3 will demonstrate some different instances that highlight a variety of applications to help understand what is proposed in relation to the Rohingya. In Section 4.4, the rules and regulations for the granting of humanitarian aid to refugees will be considered. Finally, the benefits and pitfalls of blockchain technology for identification will be discussed in Section 4.5 to more specifically understand the implications in the Rohingya refugee crisis.

4.2 An overview of blockchain technology in relation to refugee problems, specifically the Rohingya

In 2008, an article titled 'Bitcoin: A Peer-to-Peer Electronic Cash System', was published online to effectively introduce the world to blockchain technology.[123] The (never-confirmed) author, Satoshi Nakamoto, mentioned a decentralized economic system without intermediaries but shared by all users of a peer-to-peer (P2P)[124] network in a chronological order (timestamp).[125] The blockchain was initially made to support bitcoin transactions as a

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[122] 'Rohingya Project' (n 17)

[123] 'Bitcoin P2P e-cash paper' (*Nakamoto Studies Institute,* 1 November 2008) <https://nakamotostudies.org/emails/bitcoin-p2p-e-cash-paper> accessed 11 April 2019

[124] P2P means a decentralized infrastructure where each participant in the network (typically called a "peer" or a "node") acted as both: a supplier and consumer of informational resources.

[125] According to De Filippi and Wright, timestamp shows that the blocks are connected in a chronological order. It marks the time for each transaction on the blockchain proving when and what has happened on the blockchain. Primavera De Filippi and Aaron Wright, 'Blockchains, Bitcoin, and Decentralized Computing Platforms' in Primavera De Filippi and Aaron Wright (eds), *Blockchain and the Law* (HUP 2018)

sort of ledger[126], in which all transactions were recorded and made available in a public way. Since then: new applications have been developed. New uses are being created within blockchain. In many countries, there are projects for the application of technology to both the public and private sector. Numerous applications have been made in the realms of digital currencies, payments, real estate registries, voting systems, and identity systems. At the same time, a growing number of blockchain-based digital identity platforms are being developed by governments, tech companies, and nongovernmental entities, such as The Rohingya Project. In section 4.2.1 will be explained what blockchain technology is and in Section 4.2.2 the relevant applications of blockchain- technology for refugee identification documents will be analysed.

4.2.1 What is Blockchain?

Blockchain can be understood as a form of a distributed ledger,[127] a chronological database of transactions recorded by a network of computers.[128] This technology is composed by other technologies, such as a peer-to-peer network, using public and private key cryptography and a consensus mechanism.[129] To illustrate how it works, consider a lecture in which a movie will be displayed, and each scene (transaction) will be written by one student (the so-called peer) on a sheet (block) of a notebook (blockchain). All the sheets (blocks) are connected to each other (peer-to-peer network) and all students (peers) can see the sheets (blocks) of each other in order. After watching a scene (transaction), a student (peer) writes it on a sheet (block) of that notebook (blockchain). All the other students (peers) read the same sheet (block) and agree with the content (consensus mechanism). When there are no more lines or nothing else to be written on a sheet (block) and another part of the story (transaction) needs to be added, a student (peer) inserts a new sheet (block).

To add this new sheet (block), you must insert in the new sheet a unique code (hash) with the words (data) used in the previous scene (block) described.[130] In this way the students (peers) connect one scene (block) to another scene (block). Therefore, all sheets are linked. With each part of the story the students check if the one in charge of the scene that needed to be described started with the code of the last scene described or inserted a new sheet. If the

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[126] According to report by GSM Association, ledger is a list of transactions that are bundled together in cryptographically linked blocks. GSM Association, 'Distributed Ledger Technology, Blockchains and Identity A Regulatory Overview 2018

[127] Distributed ledgers are a multi-purpose technology in the digital world that are specifically designed to be shared across a network of multiple sites, geographies or institutions. Records are stored in a ledger that continues to grow. Often, as in the case of the Bitcoin blockchain, the underlying assumption is that the nodes forming the network are not implicitly trusted, i.e. they need mechanisms in place by which all parties in the system can reach a consensus on what the status of the ledger is. Ibid

[128] Shraddha Kulhari, 'The Midas touch of Blockchain: Leveraging it for Data Protection' in Shraddha Kulhari (ed), *Building-Blocks of a Data Protection Revolution* (1 ed, Nomos Verlagsgesellschaft 2018)

[129] Filippi and Wright, 'Blockchains, Bitcoin' (n 124)

[130] Hash is a unique fingerprint of all transactions contained in that block. I can be in certain way compared with the identity because it is what makes a transaction unique. Harish Natarajan, Solvej Karla Krause and Helen Luskin Gradstein, *Distributed Ledger Technology (DLT) and blockchain: Fintech note no. 1* (World Bank 2017)

student has fulfilled all the steps, he or she wins a prize and its sheet becomes officially part of the notebook of all the other students at the same time. This distributed registration of the sheets is updated and maintained by all the students, without there being a teacher verifying what is being written is called distributed ledger technology.[131]

There are three types of blockchain: private, consortium, and public. The developers of The Rohingya Project envision the use of a public blockchain network.[132] This blockchain, as the name itself suggests, is not necessary a permission to validate a transaction; rather, the participants themselves execute the consensus protocols and maintain the blocks.[133] The protocols are based on open source consensus algorithms. Anyone with a computer can be part of the network to use it and validate data; it does not need to be controlled by a company or other organization. The technology's allowance for direct transactions from one person to another without third-party assistance makes them highly efficient financially, especially because users are less reliant on banks or other financial institutions. Different decentralized consensus mechanisms for decision making are used, for example: Proof of Work (PoW).[134] For this reason, they are called 'trustless' solutions, which means that there is distributed trust among participants; in other words, there are mechanisms by which the parties reach a consensus on a particular transaction.[135] Transactions are therefore safer but they also tend to be slower due to the simultaneous synchronization of the nodes. It requires very heavy encryption to avoid fraudulent action within the network, generating a cost of high need for computational processing.[136]

As one considers the kind of blockchain that is being proposed to aid the Rohingya, it is important to clarify some fundamental features of this technology. When it comes to centralization and decentralization, some confusion of concepts can happen. The centralization of the blockchain refers to the governance of technology. A centralized blockchain will have a decentralized network in which the system distributes peer-to-peer transactions and all peers (also called nodes) distribute and share those transactions using consensus mechanisms. Unlike the decentralized blockchain, however, not all peers can make changes to consensus rules, and not any individual or company can enter the network. In the decentralized blockchain anyone can enter, participate, and check if the rules are being followed; no peer has more authority than the other.[137] Among advantages and disadvantages, the fact is that fewer peers make it easier to change the rules and present more facility to invade the system, which compromises

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[131] Ibid

[132] 'Rohingya Project' (n 17).

[133] Consensus refers to algorithms that determine the sequence and validity of transactions. Harish, Krause and Luskin Gradstein (n 129)

[134] The proof of work consensus algorithm serves as a "state transition function" that takes the current state of the Bitcoin network and updates it with a set of new Bitcoin transactions. Filippi and Wright, 'Blockchains, Bitcoin' (n 124)

[135] Preethi Kasireddy, 'ELI5: What do we mean by "blockchains are trustless"?' (*Medium*, 3 February 2018) <https://medium.com/@preethikasireddy/eli5-what-do-we-mean-by-blockchains-are-trustless-aa420635d5f6> accessed 24 May 2019

[136] A. S. Konoplev, A. G. Busygin and D. P. Zegzhda, 'A Blockchain Decentralized Public Key Infrastructure Model' (2018) 52 ACCS 1017

[137] Adam Drury, 'Centralized vs Decentralized: What's the difference?' (*Blocklr*, <https://blocklr.com/guides/centralized-vs-decentralized> accessed 25 May 2019

the security of the tool. Security is one of the many characteristics of the tool that still presents doubts and challenges, but in the next section a series of cases will be analysed to show the differences and variations in blockchain applications when applied to identification.

4.2.2 Relevant applications of blockchain technology for refugee identification documents

In this section the use of blockchain technology as a tool for identification will be discussed so that some questions about Rohingya refugees can be raised. Blockchain can be used for management of personal data and identification, including birth and death records, marriage certificates, passports and economic data. Already, there are several use cases such as ID2020, Building Blocks of the World Food Program (WFP), Tynk, and the Rohingya Project that will be outlined below.

ID2020 Alliance

The ID2020 Alliance is a multi-stakeholder private and public initiative in collaboration with the UNHCR, Microsoft, and Accenture. The main target is to ensure digital identification for over a billion individuals that do not have a formal identification, especially children, refugees, those forcibly displaced, or stateless persons.[138] The founders believe that there is no adequate digital identity available and that proving identity is a fundamental human right. A digital identity should be in line with privacy requirements such as control of one's identity and who can access data; portability so that identity can be accessed from different places and in different ways; and finally persistence, which means that the same identification will accompany the individual for life. Accenture, a global management consulting and professional services firm that provides technology joined the project to provide, through a private blockchain and biometrics technology, a global digital identity. The biometric data of individuals will be collected. Then a unique identifier will be created that will be written to blockchain which acts as an index linking all data. Through an application on your phone, an individual can create a profile that will use several security authenticators. The individual may create public and private keys according to his or her need to encrypt transactions and increase safety. Public keys can be shared through a QR code and will be controlled by the individual himself or herself.[139] The prototype that is being designed by Accenture addresses a valuable issue when it comes to data: control. In theory, the individual himself or herself chooses what data will be shared with whom and for how long.[140]

Building Blocks of the World Food Program

The Building Blocks subdivision of the UN's World Food Program is an initiative that employs a private, permissioned blockchain. According to United Nations, direct money transfers without the participation of third parties who charge high fees would be a way to

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[138] 'Manifesto' (*ID2020,* <https://id2020.org/manifesto> accessed 21 May 2019
[139] 'Alliance' (*ID2020,* <https://id2020.org/alliance> accessed 12 April 2019
[140] 'Video Transcript: Building a Trusted Identity - Blockchain ID Demo' (*Accenture,* 2018) <https://www.accenture.com/_acnmedia/PDF-73/Accenture-Building-A-Trusted-Identity.pdf> accessed 2 May 2019

provide humanitarian aid. With this in mind, Building Blocks uses private permissioned blockchain technology in a Syrian refugee camp in Jordan to record and authenticate refugee financial transactions. The biometric identification technology allows them to conduct financial transactions without intermediaries' financial institutions protecting the data of the beneficiary. When looking at the cash register, a refugee's iris is read and their respective data is accessed to food stamps to be expended. Previously the financial transactions in general took days to complete due to the vulnerability of the identification data of these individuals, but now, according to the UN, blockchain provides greater security and speed in the transactions carried out by refugees.

Tykn

Tykn, from the Netherlands, was founded by El-Rjula, a Kuwaiti-born refugee. He had his documents destroyed during the Gulf War and created a start-up focusing on private blockchain for digital identity management to help organizations validate people's identity. The start-up allows public and private organizations to issue and verify digital identities for undocumented people. Users can download an application to access services from those organizations.[141] This blockchain solution allows both public and private entities to emit and verify digital identity. Users will have an application that allows them to access services safely. The tool promises, among other things, that services can be obtained without personal data being accessed. The user will have control of their data based on a centralized tool.[142] What is interesting in this case is that personal data is not made available to access services providing privacy and security. On the one hand, non-sharing of data could prevent discrimination. On the other hand, the centralization of data is worrisome because it is a single company or entity storing and controlling data.

The cases mentioned above serve to raise important questions about the use of blockchain tools for the identification of refugees, especially for the Rohingya population. A relevant point that must be questioned is the effectiveness of this tool in granting access to civil, political, and social rights. The cases above demonstrate that there is usually a centralizing entity controlling the tool, which raises the question of who establishes the rules that determine if a refugee has the right to exist. In the more specific case of the Rohingya, although the tool is decentralized, criteria will be used to establish what defines the Rohingya identity and how their ethnicity can be reflected on an identification card. What is the legitimacy regarding the use of this specific tool to address the Rohingya problem? To clarify that, it is necessary to understand more deeply if and what the characteristics of the tool are, that would be so unique to justify its use in the identification of Rohingya refugees.

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[141] Aaron Mirck, 'This Dutch impact startup gives 'invisible' children digital identities thanks to blockchain technology' (*Silicon Canals,* 27 October 2017) <https://siliconcanals.nl/news/startups/blockhain/dutch-impact-startup-tykn> accessed 1 April 2019

[142] 'Digital Identity Management System. Private and Secure' (*Tykn*) <https://tykn.tech> accessed 24 March 2019

4.3 The benefits and shortcomings of using blockchain technology for identification

The identification of refugees, especially the Rohingya, comes with a series of unique aspects and thus specific problems that need to be solved. Blockchain technology has been treated as a revolution capable of addressing various problems, among them the question of identification of refugees. The Rohingya Project aims to address the challenges of being stateless, including a lack of formal identification, which is necessary for access to capital, credit, and other financial services. Blockchain has numerous characteristics used to justify and legitimize its choice as a solution for refugees.

As tools, decentralized blockchains claim to be able to enhance transparency, integrity, immutability, and security.[143] The tool is an open source technology ledger, with two parties able to replicate and store a copy of a transaction between them. A problematic transaction does not compromise the network. The blockchain can offer users greater control over their data. It is possible for users to control through public and private keys with whom they will share their data and what data will be shared. In a decentralized blockchain, users do not need to work with outsourced organizations or a central administrator. The system works without intermediaries; all the technology participants make the relevant decisions.

In addition to the benefits, the blockchain may also present some disadvantages. First, using a tool such as blockchain is a significant challenge for individuals who are unfamiliar with technological advancements. It takes a certain level of skill to consciously use technology. Second, the technology uses a large amount of electricity to create each block. The continuous process of block mining stimulated by the extensive dissemination of the tool as a solution to many problems encourages people to use more electricity. This can make blockchain an environmentally unsustainable technology. In general terms, these are the issues that arise in terms of blockchain for identification. When it comes to refugees and the possible benefits of the blockchain technology, the analysis should be further examined considering the aspects of vulnerability and a lack of rights.

4.3.1 Benefits and drawbacks of using a blockchain for Rohingya refugee identification

The Rohingya population, invisible as citizens in the eyes of the Burmese government, could use technology for recognizing their ethnicity According to The Rohingya Project as well as other initiatives to provide digital identification for refugees, blockchain presents some technical characteristics that apparently make the system safer and more innovative than others to address the refugees' issues. However, the success of this solution would indeed depend on the collaboration of the countries and there is still no guarantee that it will be well accepted by governments. In Bangladesh, the government has its own digital identity program and there is a tendency to repatriate the Rohingyas. This may contribute to the government not accepting this identification. The Malaysian government has been opened to implementing blockchain

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[143] Brian A. Scriber, 'A Framework for Determining Blockchain Applicability' (2018) 35 IEEE Software 70

solutions, especially in relation to the financial system, which increases the chances that the Project will be accepted for the supply of digital identities.[144]

Vulnerable populations such as refugees need identification documents via a tool that allows them to be available for use indefinitely. This is especially true with regard to the identification of a population that has had few documents that indicated its ethnicity and nationality because of actions by the government of its own country. Traceability is one of the advantages of blockchain since the history of transactions are recorded with them and thus cannot be manipulated but can be traced.[145] The registration of Rohingya refugees, including their nationality and ethnicity, could be tracked. If, in the past, transactions proving their nationality had been registered in a tool that would allow traceability, mere confiscation of documents by an arbitrary government would not so easily mean its loss. In other forms of registration and authentication, nationality/citizenship can disappear. Theoretically, the traceability of the blockchain would allow the identity of the Rohingya to be registered in another way and not be erased. Since the transactions are public, and any institution can access it including companies offering services and government agencies in host countries, this could serve to reinforce discrimination and surveillance in relation to the Rohingya. However, even if these documents are in a tool with traceable transactions, the Rohingya would remain stateless. In this case, the traceability of the blockchain does not add a relevant component to the location of the Rohingya and does not guarantee them the recognition of their citizenship.

The Rohingya need the information about them, especially in relation to their nationality and citizenship, to be stored safely and securely. The near impossibility of data being altered in this technology makes it an important asset when compared to other available registration systems. Blockchain is immutable as a result of the design of its architecture in which the parties are responsible for the authenticity of the transactions they conduct. The immutability is achieved by means of a hash function that makes the blockchain theoretically unbreakable by encrypting the information. After the two parties validate a transaction, the block cannot be changed later. For a new transaction to be added, a new block must be created, and the previous transaction remains on the chain. This preserves the integrity of the data that has been entered into the network. Only if someone holds 51% of the mining hash rate they can modify the blocks.[146] Thus, refugee data would be preserved and could not be modified by third parties without it being recorded. The protection to which the Rohingya should have access is much broader, however, than the impossibility of modifying a registry. The tool does not address clearly how immutability and traceability relate to privacy, cybersecurity, and data protection in the case of digital identities for a marginalized population, three key safeguards for Rohingya refugees.

Refugees need formal identification tools that empower them in the sense that it allows them to control their own data so that they have reduced reliance on states. It is part of the relationship between an individual and its government, that data are given to grant assistance,

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[144] Allison Anderson, Seth Kane and Others. 'Identities for Opportunities. University of Washington, 2018.' 34-35
[145] Daniel Conte de Leon and others, 'Blockchain: properties and misconceptions' (2017) 11 APJIE 286
[146] Harish Natarajan and others, *Distributed Ledger Technology (DLT) and blockchain* (n 103).

protection and access to certain rights as citizens. However, this does not mean that these data can be used for other purposes. In the case of refugees, given their situation of persecution in the country of origin and vulnerability and social exclusion in host countries, added to the uncertainty about their future, access to an identification must occur with the provision of minimally necessary data. Allowing them to access their rights while they do not provide unnecessary information that may be misused by governments, humanitarian agents, NGOs and tech companies. The refugees must have control over their own data. Having control over their own data includes having clarity about why they are necessary. So, refugees can have the possibility to choose not to use the technology. The blockchain does not offer more results in this sense than other decentralized database.

The decentralized blockchain is acclaimed for its ability to offer transparency with all transactions being visible.[147] This allows for both the Rohingya nationality and refugee data, once registered, to be seen wherever they are. The data can be stored transparently. Because of the use of a P2P network, information is authenticated, and the metadata that makes up the transactions becomes available to be viewed. In a decentralized blockchain, this means that anyone can enter the network and see the transactions and their chronology. This increases trust in the network, since one cannot hide what is being done. The concept of transparency, though, in promoting Rohingya rights is broader. The challenge in terms of transparency is to promote the right to information , the ways in which certain technology is being used, and what will be done with personal data. This includes having consent or registering objections from the individual without meaning that he or she will be excluded, as was done in the past with the identification cards issued by the Myanmar authorities. Regarding the subject's rights, blockchain does not present itself as an innovation to one of the tools currently in place and does not improve the situation of the Rohingya.

Perhaps the most complex factor in the situation of the Rohingya is in relation to obtaining citizenship. For this, it would be necessary to change the statutory stateless status determined by a sovereign state, which is responsible for creating its own laws. And even more, it requires making that change reflect effectively on the Rohingya's lives. The blockchain proposed by The Rohingya Project mentions that ethnicity will be confirmed through interviews and other sources, but it does not indicate the exact criteria on which this confirmation will be based. If the criteria are the same as the Myanmar Citizenship Act in which it is necessary to prove the existence of ascendants before 1824, the exclusion will remain. In addition, at the moment, the granting of refugee status as well as the production of a Rohingya identification document recognized by the host country and the international community still focuses on the UNHCR. Therefore, it seems that the stateless status, which is essential for the Rohingya to have access to civil, political, and social rights, will remain the same despite the potential of blockchain innovations.

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[147] Conte de Leon and others, 'Blockchain' (n 128)

4.4 Conclusion

Blockchain is a tool that can be used for various purposes, including digital identification. As one demonstration of the power and versatility of this innovation, the World Economic Forum suggests an estimated 10% of the world's gross domestic product (GDP) will be stored in blockchain form by 2027.[148] The fundamental characteristics of blockchains, as discussed in the preceding sections, have made it a desirable technology throughout the industry. Thus, a number of online applications for providing digital identities to refugees have been developed by NGOs and humanitarian actors, such as UNHCR. The applications considered in this work show that it is possible to use technology to identify refugees and promote a certain level of social inclusion. Such applications give refugees access to some services as in the case of The Rohingya Project.

On the one hand, the features offered by certain blockchains, such as transparency, immutability, and traceability, can provide better formal identification than the forms to which refugees, especially the Rohingya, have had access to in the past. At the same time, the same features that can be seen as benefits can also give rise to uncertainties or problems that are difficult to solve. For instance, the identification of individuals on a large-scale demands storage space and computational power greater than that of a typical database. The technology offers advanced identification delivery processes for well-defined, complex purposes that require transparency and traceability, but that same traceability and transparency potentially make it attractive to governments or corporations that could transform the technology into a powerful tool for surveillance and control.[149] Finally, the actors who grant legal refugee status and who offer protection and assistance are the same,[150] regardless of the technology used, and those same actors are responsible for recognizing nationality. The rights of this population will be determined by the laws and domains in which the rules concerning refugees and their identification are available. Consequently, the simple adoption of a decentralized blockchain to remedy Rohingya identification, regardless of what it is, does not guarantee access to the rights that they need. Some of the problems faced by the Rohingya can be improved by blockchain applications, but the deeper issues such as statelessness and the lack of civil and political rights make it an imperfect solution. The characteristics of this technology can create a more technically elaborate document, but blockchain does not add to the users an outstanding value rather than existing databases. As well it does not address the central problems of the refugees, which cannot be solved by an identification provided by this or that technology. Blockchain ends up as more an accessory than a solution.

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[148] 'Decentralized Identity Foundation' (*DIF*) <https://identity.foundation> accessed 23 May 2019

[149] For more on this see: De Filippi and Wright (eds), *Blockchain and the Law: The Rule of Code* (n 6)

[150] 'Refugee Status Determination' (*UNHCR*) <https://www.unhcr.org/refugee-status-determination.html> accessed 5 May 2019

Chapter 5. Conclusion

The refugee crisis is one of the greatest challenges of this century, which the international community has been failing to address. For the Rohingya population, this failure is evident since they remained persecuted and stateless. In the eagerness to solve the problems faced by them are being proposed measures that involve the use of blockchain technology. There is a vast literature on the diverse types of blockchain and on the implementation of a tool that many authors consider to be the ideal technology for a multitude of purposes, especially in the area of finance. This thesis examined the blockchain with particular characteristics as a possible solution to the difficult problem faced by the Rohingya refugee population. Therefore, this thesis considered to what extent solutions based on blockchain technology could improve the access of Rohingya refugees to formal identification and, through that, to civil, political and social rights.

First, the purpose of identification in relation to the specific problem of the Rohingya was examined. Second, the problems arising from the Rohingya refugees' lack of formal identification were considered. Third, blockchain was explained, and the problems that blockchain can solve in relation to this population were analysed. In the context of the plight of the Rohingya, this research illustrated the role of such elements as identity, nationality, and citizenship in regard of the functions of an identification document and its relationship to obtaining and maintaining certain rights. To reach particular conclusions, the meaning of identity and the purposes of identification were analysed. People become refugees because their self-defined identity is not recognized by the community. The primary function of an identification document is to allow people to demonstrate others that they are who they claim to be. It proves identity, which constitutes how people perceive themselves and how they are perceived by society.

These points together describe the role of identification for the Rohingya population. In the absence of one of these two elements, the process of identification and proof of identity are flawed or incomplete, giving rise to other issues. The first is the impossibility of proving oneself to belong to a particular nation. If an individual does not have an identification document and/or is not seen as part of a particular group, no formal nationality is established, as was the case with the Rohingya. The same is true in regard to how a government sees an individual within the state. Therefore, if the state of Myanmar does not recognize a Rohingya individual as a member of the state, that person has no citizenship. If someone simply lacks a formal identification document and has neither nationality nor citizenship (the last two occurring for various reasons, among them the lack of an appropriate formal identification document), the person's civil, political, and social rights are not available or cannot be fully exercised. This does not mean that all Rohingya refugees lack formal identification documents. The research conducted for the present study, however, implies that a lack of identification documents, nationality/citizenship and rights, jointly or separately, often characterizes the refugee's history. In the case of the Rohingya, the last two elements are always absent.

The Rohingya's lack of identification is one of the reasons why their ethnicity, nationality, and citizenship are not recognized and why claiming any rights becomes even more

difficult. The statelessness of this minority, the result of discrimination on the part of an authoritarian state and national legislation, which failed to recognize them as citizens, could make them invisible, but the Rohingya situation is even more serious. In addition to not being seen, having no access to basic services, being financially excluded, and lacking protection and legal assistance, they are systematically persecuted by the military, their lands are confiscated, their women suffer sexual violence, and they end as refugees in search of protection. Even the legal process of becoming a refugee, which begins with arrival in a country and the registration of individuals by the authorities or by the UNHCR itself, becomes more difficult because of this statelessness, in relation to which a lack of identification plays an important role. Statelessness is a key element of the situation of the Rohingya, as it characterizes their exclusion by the government of Myanmar. In host countries the situation is no different. Identifying, selecting and categorizing refugees is a constitutive practice of the administrative procedures leading to their admission. However, even when people are granted legal refugee status, statelessness worsens their civil, political, and social exclusion in the country to which they have fled. All these matters are part of the Rohingya crisis and must be effectively addressed.

To resolve them, the Rohingya Project proposed a decentralized blockchain. This project understands that the characteristics of this technology offers a key to solving the problems of the Rohingya refugees in various locations. To determine whether blockchain offers a viable solution, the needs and concerns associated with the Rohingya refugee crisis were studied in relation to the features of the blockchain. One factor that must be addressed in relation to the Rohingya is the possibility of having a formal identification that cannot be usurped or confiscated with their documents and rights. The traceability of the blockchain is presented as an interesting feature in this regard. But the traceability also must be viewed with caution, since it is possible to use it to reinforce patterns of discrimination rather than provide more inclusivity. In regard to the need for an identification that cannot be usurped, blockchain can provide certain immutability, as a record cannot be changed while the blockchain is active. However, no technological solution is free from human interference. Moreover, the Rohingya would remain under judgement or evaluation by subjective criteria. Rohingya refugees need instead a mechanism that puts them in control of their data and makes them less dependent on a specific government while also promoting their inclusion. The transparency of transactions in a decentralized blockchain has been proposed as solution, but Rohingya refugees need more than transparent transactions to access their rights effectively. Providing a digital identity via a decentralized blockchain does not promote data collection, consent, privacy, political autonomy, etc. The central problem that exacerbates the plight of the Rohingya refugees is their statelessness. The decentralized blockchain does not solve that problem, as it does not change the standards that led to their legal status.

In conclusion, this vulnerable population needs a technology that allows them to prove that they are Rohingya. Based on all the analysed points, one can conclude that identity technology relates in a non-specific way to the real problems of refugees. To solve identification problems, a technology must be conceived and developed to address the problems of the end user. If providing adequate humanitarian aid involves the use of a

technology, this must occur because of that technology's promise in guaranteeing the rights of that vulnerable population, not as a way to reduce bureaucracy, enhance accountability, or make it easier for companies to deliver services. The Rohingya refugees' rights will be improved only when their specific situation serves as the main focus of any solution.

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