

Data as a Lens for Understanding what Constitutes Credibility in Asylum Decision-making

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In asylum decision-making, legal authorities rely on the criterion “credibility” as a measure for determining whether an individual has a legitimate asylum claim; that is, whether they have a well-founded fear of persecution upon returning to their country of origin. Nation states, international institutions, and NGOs increasingly seek to leverage data-driven technologies to support such decisions, deploying processes of data cleaning, contestation, and interpretation. We qualitatively analyzed 50 asylum cases to understand how the asylum decision-making process in Denmark leverages data to configure individuals as credible (or not). In this context, data can vary from the applicant’s testimony to data acquired on the applicant from registers and alphanumeric data. Our findings suggest that legal authorities assess credibility through a largely discretionary practice, establishing certainty by ruling out *divergence* or contradiction between the different forms of data and documentation involved in an asylum case. As with other reclassification processes [following Bowker and Star 1999], credibility is an ambiguous prototypical concept for decision-makers to attempt certainty, especially important to consider in the design of data-driven technologies where stakeholders have differential power.

CCS Concepts: • **Human-Centered Computing** → **Collaborative and social computing**; *Empirical studies in collaborative and social computing*

KEYWORDS: Refugees, Asylum, Discretion, Data, Categorization, Asylum Decision-making, Credibility

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1 INTRODUCTION

In 2021 the Danish government announced that it intended to deny renewing the temporary residency status of at least 189 Syrians. Besides Hungary, Denmark would be the first European nation state to revoke the residency permits of Syrian refugees and no longer grant them asylum, based on its assessment that some parts (Damascus area) of the war-torn country are safe to return to¹. The data that informed the country report were contested by expert sources

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¹ <https://www.theguardian.com/world/2021/apr/14/denmark-revokes-syrian-refugee-permits-under-new-policy>

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used by the Danish government². According to the Danish NGO Refugees Welcome, 90 Syrians, mainly women, have since lost their appeals, since the new policy assumes that because as women they do not serve in the Syrian military, they are not at risk of reprisals for evading conscription.³ The case in point demonstrates the centrality of data as a lens for understanding what constitutes credibility and certainty, which are both important categories in asylum decision-making.

The research outlined in this paper intersects research on collaborative technologies (e.g., caseworker systems) that support classification and categorization in data-driven bureaucratic practices [6, 23, 34, 36, 41] and research in migration and asylum decision-making – a concrete domain and interest for Computer-supported Cooperative Work (CSCW) and the broader Human-Computer Interaction (HCI) research [1, 42, 43, 44, 45].

An enduring challenge for asylum decision-making remains the uneven application of international law across states. To mitigate this challenge, nation states, international society, and NGOs increasingly are embracing the collection and use of personal data of people affected by forced displacement. The UN Refugee Agency (UNHCR) is rolling out its Population Registration and Identity Management EcoSystem⁴, which includes state of the art biometric data.⁵ The EU's research fund funneled money to the (since-canceled) iBorderCtrl project,⁶ which purported to use facial recognition technology to detect traveler's attempts to deceive border agents during pre-arrival registration.⁷ And, aiming to detect migrants and refugees trying to reach Europe, Frontex, the European border and coast guard agency, has tested military-grade surveillance drones in the Mediterranean and Aegean.⁸ The UNHCR and the World Bank opened the Joint Data Center on Forced Displacement (JDC) in 2019, with the aim to “enhance the ability of stakeholders to make timely and evidence-informed decisions that can improve the lives of affected people”⁹; thus, to apply ML on individual cases require large-scale datasets for building and training the underlying data models.

Many of these data-driven technologies entail new uses of machine learning (ML) for decision-making. The EU at the same time considers asylum decision-making as a high-risk area for uses of ML and other types of artificial intelligence (AI) and automation.¹⁰ In other parts of the world, legal scholars endorse using data-driven technologies to support decision-making in asylum adjudications [e.g., 9] with the purpose of minimizing variation in decision outcome between similar cases [35], improving impartiality, and decreasing human errors made by judges [9, 22].

The context of this study is asylum decision-making in Denmark. When applying for asylum in Denmark (as in other EU countries), applicants must prove either previous persecution or a well-founded fear of being persecuted if they return to their country of origin, which become data supporting asylum decision-making. However, international schemes (e.g., the UNHCR

² <https://www.thelocal.dk/20210422/denmarks-syria-report-11-out-of-12-sources-reject-conclusion-leaving-only-assad-general-in-support/>

³ <http://refugees.dk/fokus/2021/oktober/status-paa-syriske-flygtninge-der-har-mistet-deres-opholdstilladelse-i-danmark/>

⁴ <https://www.unhcr.org/blogs/wp-content/uploads/sites/48/2018/03/2018-03-16-PRIMES-Flyer.pdf>

⁵ https://www.unhcr.org/blogs/wp-content/uploads/sites/48/2018/03/2018-02-Digital-Identity_02.pdf

⁶ <https://www.iborderctrl.eu>

⁷ <https://www.euractiv.com/section/digital/opinion/the-eu-is-funding-dystopian-artificial-intelligence-projects/>

⁸ <https://www.nytimes.com/2020/11/26/us/un-panel-technology-in-policing-can-reinforce-racial-bias.html>

⁹ <https://www.jointdatacenter.org/who-we-are/#mission>

¹⁰ https://ec.europa.eu/commission/presscorner/detail/en/IP_21_1682

Handbook¹¹) are not providing concrete definitions or guidance on these matters to states. Instead, asylum proceedings, and how decisions are made in practice, are left to each state, and for adjudicators to decide based on asylum seekers' testimonies and data and information provided by various authorities, e.g., the Ministry of Foreign Affairs, the Danish Immigration Service, and NGOs such as the Danish Refugee Council. Here the legal authorities and decision-makers use credibility as a measure for determining the identity of whether an individual has a legitimate asylum claim; that is, whether they have a well-founded fear of persecution.

Little is known about how asylum decision-makers establish asylum-seekers' credibility from a data perspective. Scholars tend to describe this decision-making process as a discretionary practice consisting of shifting authorities [27]; it remains understudied perhaps due to the challenges associated with conducting research in a highly politicized domain [33]. In Denmark, after the initial rejection from the Immigration Service asylum appeals are formally decided by a board of 3 members: 1) a chairperson, an appointed judge; 2) a second member, appointed by the Ministry of Refugee, Immigration, and Integration Affairs; and 3) a third member, nominated by the Council of the Danish Bar and Law Society.¹²

The applicant's testimony is one example of data in asylum decision-making that enters the system. In many asylum cases, the applicant is the only witness to their experience. Cases often lack direct evidence either to document or contradict the applicant's testimony about their motive for asylum. The Country of Origin Reports and Notes prepared, for example, by the Immigration Service's Country of Origin Information Division¹³, one of the formal authorities of the Danish asylum system, is another source of data with real effects on the applicants, as is the case for Syrians that risk having their residency permits revoked in Denmark when the policy and underlying criteria for asylum change. Whether asylum is granted or not largely depends on the applicant's ability to tell a "credible" story [13] within the statutory "refugee" category. In one case summary of an asylum adjudication from 2019, the Danish Refugee Appeals Board states:

The Refugee Appeals Board cannot use the claimants' explanation as basis for the asylum motive as the Board finds that the explanation appears constructed for the occasion. The Refugee Board finds that the complainant's explanation appears not to be credible, and the Board attaches particular importance to the fact that the claimant at the asylum interview [a specified date in the spring] 2013 and at the extension interview [a specified date in the spring] 2018 has explained divergently on key points (Refugee Appeals Board, soma/2019/199/JABP *translated* by the first author).

Similar wordings such as "constructed for the occasion", "appears not to be credible", and "divergently" are found in many more asylum adjudications publicly available from the Danish Refugees Appeals Board (also see Fig. 1). The urgency of this research into how asylum authorities determine credibility is clear from prior studies that found that "[t]he judgment of the credibility of the asylum motive at court has profound consequences for the future lives of asylum seekers" [13, pp. 177] and that "the processing of asylum applications is fundamentally a matter of gauging credibility, [wherein] mistrust is a significant factor in the production of negative decisions" [48 pp. 20]. In this paper, we argue for how CSCW and HCI researchers can

¹¹ <https://www.refworld.org/docid/4f33c8d92.html>

¹² https://fln.dk/da/English/General_information_regarding_fln

¹³ <https://www.nyidanmark.dk/en-GB/Words-and-concepts/US/Asylum/Country-information>

work to further the understanding of data and how this category of credibility is functioning in legal asylum decision-making.

As ML and similar data science techniques gain momentum, including in high-risk areas such as asylum decision-making, the seminal work of Bowker and Star [6] is newly relevant for understanding the underlying categorization and classification practices of “that which is perceived as real, and the consequences of that perception” for those subject to asylum decision-making. Since credibility plays a major role in asylum decision-making, this paper aims to qualitatively investigate the formal data practices that inform asylum decision-making in Denmark.

The question we ask in this paper is: *How are individuals applying for asylum configured as credible through different forms of data and documentation in asylum decision-making in Denmark?*

We investigated this question qualitatively as part of an interdisciplinary research project: Data Science for Asylum Legal Landscaping (DATA4ALL)¹⁴. The paper contributes a study of publicly available summaries of 50 asylum cases processed by the Refugee Appeals Board between 2017 and 2020. Thus, applying data as a lens, our goal is to understand how the individual applicant is constituted or determined ‘credible’ or ‘non-credible’ through the data practices of asylum decision-making in Denmark.

We find that credibility appears as a central point for decision-making in all 50 appeals cases. As with other forms of reclassification processes, credibility from a data perspective is an ambiguous prototypical concept [following 6]. We find that the assessment of credibility in asylum decision-making in Denmark resembles a discretionary practice, wherein certainty is achieved by establishing *any divergence* or contradiction between the different forms of data and documentation.

Although data can enable more informed decision-making in this and other contexts, an uncritical trust in data and ML risks reproducing bias and intensifying well-documented issues of legal and political discrimination, inequality, and injustice [4]. Recognizing that data is never neutral or objective, research communities in CSCW and HCI are increasingly asking questions about the role of data and data-driven technologies. These questions, we argue, are especially important to consider in domains where individuals and legal authorities have differential power with consequences for people’s lives and wellbeing [11, 16, 30].

2 RELATED WORK: DATAFICATION, CLASSIFICATION AND CATEGORIZATION IN BUREAUCRATIC DECISION-MAKING

Data and data-driven technologies are increasingly becoming an institutionalized measure to inform credibility in bureaucratic decision-making, but little research documents the structured and systematic ways that credibility is entering into these processes [7]. In CSCW and the broader HCI community, new research agendas have formed since the major refugee crisis in 2015 [43, 44, 45]. From the perspective of these new research agendas, data are produced through categorization and discretionary practices [5, 18] that become the material manifestation of infrastructures of society and how decisions are made.

Any working infrastructure coexists with classification systems that offer advantages or oppression for individuals or groups [6 pp. 6]. Categories are never merely neutral descriptors

¹⁴ <https://asylumdata.ku.dk/research/data-science-for-asylum-legal-landscaping-data4all/>

that objectively inform a set of circumstances. Classifying people into groups can achieve certain tasks [23 *following* 6]. In our case, when a person flees their country of origin and enters another country, according to international law they fall into the categorization of ‘a forcibly displaced migrant’. When a person applies for asylum, they can be a ‘first-time applicant’ or a ‘repeated applicant’ from the perspective of the country where they seek asylum. If the applicant case falls under the 1951 Refugee Convention definition of refugee, they are granted protection status and re-classified as such.

As with other types of bureaucratic decision-making [23], subtle categorization is characteristic of discretion. Asylum decision makers interpret the categorization by others to establish credibility. Here subtle categorization is applied through the implicit communication of credibility in the authority’s documentation of, for example, the asylum motive using residual categories such as “divergently” [*following* 25].

Møller et al. argues [25], that discretion is a practice where human empathy can enter decision-making processes and allow for a human-centered perspective into a highly politicized area. On the other hand, as pointed out by legal scholars in asylum studies [27], discretion can be a space for subjectivity (whether empathic or not) that may threaten the rule of law, and thereby the justness of the resulting legal decisions. From this perspective, discretion constitutes an unruly space outside law that makes new forms of data for decision-making appealing.

The act of classifying people, as Bowker and Star [6] show in their study of the role of documentation in the Apartheid regime in South Africa, demonstrate how power and politics works through categorization. A passport becomes critical for deciding who gets what, when, and why. Categories have politics [41]. The discretion of professionals is thus pivotal when categories and classifications are not mutually exclusive [36].

Attaining a specific legal categorization as a refugee impact whether one has the right to stay in a country, work, and provide for oneself. When the Danish asylum authorities denies a person refugee status, they may be deported to countries where they could face persecution and threats to their life despite the decision that it is not a risk. In this continuum it is an ongoing discussion in migration and refugee studies how forms of persecution that are not related to race, religion, nationality, membership of a particular social group, or political opinion can be accounted for [43, 44, 45].

From this perspective the growing interest of NGOs and nation states and significant investments in ML and other data science techniques for support of asylum decision-making bring to the fore the added power vested in data when such practices are built into data-driven technologies.

2.1 Datafication in Asylum Decision-making

In the process of determining the identity of the applicant and whether there is a well-founded fear of persecution upon returning to their country of origin, there is an increasing pursuit by asylum authorities to gather and share as many data points as possible about the applicant [29, 46]. These data traces, that intersect and datafy the individual, are used to inform asylum decision-making. Asylum applicants cannot opt out of this datafied process. Ustek-Spilda and Alastalo [46] argue that “there seems to be no information that is too private to collect and no data that is too personal to store when it comes to those claiming asylum” (pp. 10). Through various modes of asylum decision-making, the applicant’s data is assigned categorical meaning without direct participation, knowledge, or consent.

Sambasivan et al. [37] show the heightened downstream impact, particularly for vulnerable communities and contexts like asylum, if legal authorities undervalue data quality as a factor in decision-making. As data come to play a larger role in society and political life more broadly [24], so does the impact of ‘data cascades’ – the compounding events causing negative downstream effects following from the undervaluing of data quality. This raises questions on the emphasizing of data modeling - over data work - where data paradoxically is the most glamorized aspect of the application of such techniques as ML [37]. Research on data work demonstrates how data is never simply “raw” [19, 24, 34], meaning data is neither neutral nor objective. In the context of asylum decision-making, we must pay attention to how data are created as an inherent part of asylum decision making in order to reach a decision [26, 38].

In a similar fashion, Liodden [27] argues that one of asylum decision-makers most important jobs “is to make correct distinctions among applicants, or in other words, to accord justice to the right group of people” (pp. 247). Cheney-Lippold [10] points out that the “production of data is, at its genesis, encased in a web of preexisting meaning, in which data are not given; they are made” (pp. 54). Pine and Liboiron [34] show that data is produced by techniques of measurement that are imbued with judgments and values that dictate what is counted and what is not, what is considered the best unit of measurement, and how different things are grouped together and ‘made’ into a measurable entity” (pp. 317).

Across these studies we learn how technologies saturate political life and data justice [e.g., 11] becomes a matter of an individual’s possibility for documenting their asylum claim. For the displaced individual, the authority’s extraction of their data and documenting of their existence is critical for proving credibility and being ‘counted’. The burden of proof is not to be underestimated [14]: it takes local, contextual, understanding for the individual applicant to understand the asylum system.

3 METHOD AND LIMITATIONS

The research outlined in this paper is part of an interdisciplinary research project: Data Science for Asylum Legal Landscaping (DATA4ALL)¹⁵, that uses data science techniques for explanatory research. As a preliminary study, publicly available data from the decision summaries of asylum cases processed by the Danish Refugee Appeals Board were extracted from the Board’s repository¹⁶ on October 20th, 2020; that is, approximately 8,000 decisions on asylum applications during the period 2003-2020. The cases are organized by the Secretariat of the Refugee Appeals Board’s along three categories: year of decision, the applicant’s country of origin, and asylum motive (e.g., “gender-related persecution”, “religious matters”, “political conditions”).

The empirical materials that we study in this paper are 50 randomly sampled cases taken from the 8,000 total cases. The 50 cases were sampled by the data scientist of the DATA4ALL project using the Python embedded function `random.sample()` that performs random sampling without replacement, where each item in the indicated list has the same probability of being sampled [31]. That probability would be $1/N$ for each item, N being the length of the list. These 50 cases were settled in the period 2017-2020.

Drawing on qualitative thematic analysis as our guiding set of principles [8], we approached our empirical dataset in 5 steps:

¹⁵ <https://asylumdata.ku.dk/research/data-science-for-asylum-legal-landscaping-data4all/>

¹⁶ <https://fln.dk/da/Praksis>

1. A close reading of the 50 summaries, aiming to thoroughly acquaint ourselves with the body of empirical material to be analyzed.
2. Based on the close reading, as well as prior studies that have shown that asylum rejections often occur due to doubts about the ‘credibility’ of applicants, we performed a search for keywords related to ‘credibility’ across the 50 decision summaries. The purpose of this search was to gain an overall understanding of how frequent the notion of ‘credibility’ and related words and phrases occurred in the material (Fig. 1). The aim of figure 1 is to showcase and clarify how often the concept of credibility occurs in the summaries and thus the asylum decision-making.
3. We performed an open coding, meaning that we categorized different portions of the empirical material based on:
 - a) the preliminary close reading
 - b) the keyword search (Fig. 1)
 - c) the different types of data practices, relevant to asylum decision-making according to Danish authorities (that we outline and discuss in Section 4]
 - d) repetitions, meaning topics that recurred several times in the summaries relating to our research focus
 - e) our research question: How are individuals applying for asylum configured as credible through different forms of data and documentation in asylum decision-making in Denmark?

We further reviewed these codes to outline connections and relations to concepts and categories in the existing literature relevant to our research question. We reduced the number of codes into 5 higher-order themes (Fig. 2), and conceptualized them by naming each one, allowing us to capture better insights into the data and thus explore our research question.

Keywords	Occurrences
credibility	10
made probable	58
not made probable	26
not probable	10
divergently	63
divergent	12
divergence	3
the divergence	1
striking	10
constructing for the occasion	16
expansive	24
incoherent	8
unlikely	19
convincing	12
self-experienced	6

Fig. 1. The occurrences of keywords taken from the 50 decision summaries relating to credibility.

Higher-order themes	Occurrences	Case number
Divergence Across "Raw" Data and "Cleaned" Data	10 out of the 50 cases	1, 3, 11, 13, 16, 17, 18, 30, 34, 50
Divergence Across Records of Legal Authorities	13 out of the 50 cases	2, 8, 10, 17, 34, 38, 39, 41, 42, 46, 47, 48, 50
Divergence Across Countries' Shared Data and Records	5 out of the 50 cases	4, 5, 12, 20, 21
Divergence Across Policy-informed Background Data and the Asylum Claim	15 out of the 50 cases	1, 5, 8, 17, 19, 20, 24, 28, 30, 31, 35, 37, 41, 42, 47
Technology-Induced Data Informing Credibility	3 out of the 50 cases	9, 16, 26

Fig. 2. The 5 higher-order themes, their number of occurrences, and case number where they occur.

The data from these cases have 3 obvious limitations. First, they are cases that were initially rejected by the Danish Immigration Service, and thus not representative of the overall asylum cases processed in Denmark. Second, not all cases processed by the Refugee Appeals Board are publicly available, and our sample is therefore not representative of the complete set of asylum cases. Third, the 50 cases contain only summaries of the asylum decisions. Despite these limitations, we argue that these cases open a window to better understanding the various data practices of relevance to the categorization of credibility in asylum decision-making in Denmark.

In the following we outline how data can enter the asylum decision-making process.

4 THE FORMAL DATA LANDSCAPE OF ASYLUM DECISION-MAKING

People seeking asylum in Denmark are introduced to and managed by a range of authorities (Fig 3). Asylum-seekers entering Denmark first encounter the police, either at the airport close to the Danish capital, on the border between Denmark and Germany, or in Sandholm, the asylum reception center in the Capital Region of Denmark. Next, the Danish Immigration Service decides where the case shall be processed according to the Dublin Regulation (another country might be responsible for processing the case, what is called the "1st asylum country"). If the applicant only applied for asylum in Denmark, the application will be determined in Denmark as either: 1) Manifestly unfounded procedure (if the Immigration Service finds that the applicant has no valid grounds for seeking asylum - e.g., if the applicant seeks asylum for economic reasons. The Danish Refugee Council¹⁷ can veto this decision, if so: Normal procedure), 2) Expedited version of manifestly unfounded procedure (i.e., the applicant comes from a number of certain countries that are considered safe. Danish Refugee Council can veto, if so: Normal procedure), or 3) Normal procedure, where most cases are decided. If the applicant receives a rejection (a written decision) from the Immigration Service, the case is automatically appealed to the Refugee Appeals Board. The Refugee Appeals Board examines the appeal and ultimately confirms the claimant's rejection or approves asylum¹⁸.

In the following, we briefly review the different types of data that are relevant to asylum decision-making according to the Danish authorities.

¹⁷ An international humanitarian displacement organization supporting refugees and internally displaced persons in 40 countries. They assist refugees and displaced people and safeguard their legal rights.

¹⁸ <https://www.nyidanmark.dk/en-GB/Waiting/Asylum/Processing%20of%20an%20application>

4.1 Register Data

For the first data collection relevant to asylum decision-making, the police will collect data such as the applicant's full name, date of birth, and country of origin. The applicant is asked to check whether the police have spelled their name correctly and accurately recorded their date of birth and country of origin. Applicants are asked to provide any breeder documentations (documents used to support applications for identity) they may have with them, such as passports, birth and/or marriage certificates, and residence and travel documents. The Danish immigration authorities may in some cases keep these original documents until the examination of their asylum application is completed¹⁹.

4.2 Free Text Data

A 10-page asylum application form (Fig 4), which is the starting part of the overall Danish decision-making process, critically shapes the data collection and categorization. NGOs in Denmark such as Refugees Welcome argue that the application is critical for decisions on credibility [3]. The application form includes questions about name, date of birth, place of birth, latest address in home country, information about spouse or live-in partner, children, parents, siblings, asylum motive and what the applicant fears will happen if they are sent back (three blank pages available for this part), date of departure, and travel route. The form states that the applicant is obliged to provide all relevant information, and that it is an offense to give misleading information. The asylum form is available in 27 languages and can be answered in any preferred language. Illiterate people are offered an interpreter to fill out the application form²⁰.

4.3 Biometric Data

During the first interview, the Immigration Service can require an age estimation of the applicant. In Danish migration law, age estimations fall under 'elucidation of identity.' The estimation consists of a dental examination, an X-ray of the wrist, and a naked body examination [12]. If the applicant's age is estimated over 18 years, they no longer fall under the protection of the status of an unaccompanied minor. For applicants aged 14 years and above, police record their signature and biometric data (fingerprints and facial images) and store them at the Danish Immigration Service.

¹⁹ <https://flygtning.dk/danmark/asyl/asyl-i-danmark/asylproceduren>

²⁰ <https://flygtning.dk/danmark/asyl/asyl-i-danmark/asylproceduren>

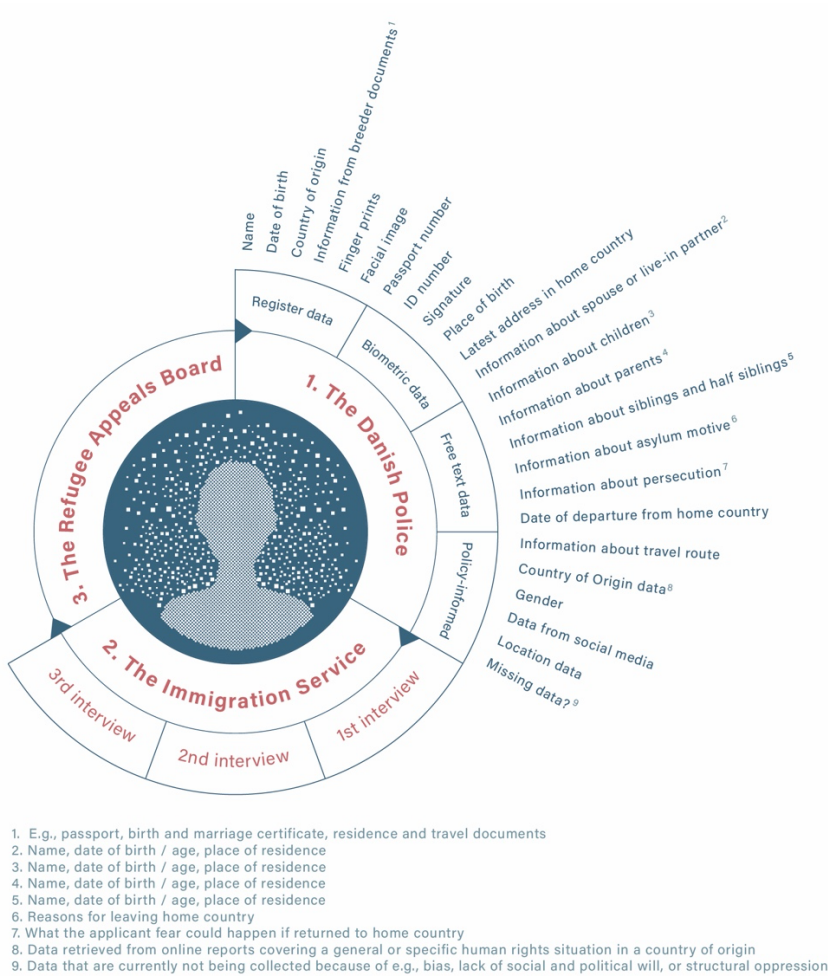


Fig. 3. The Landscape of Data Collection in Asylum Decision-making in Denmark.

Biometric data also plays a central role in European border collaboration [12]. Denmark cooperates with all other EU countries, as well as Norway, Iceland, Liechtenstein, and Switzerland, under the Dublin regulation, which determines which country is responsible for assessing an asylum application. An application for asylum may be processed in another “Dublin country” if the applicant has close family member(s) (e.g., spouse and/or children under 18 years) there, has a visa or residence permit, or has entered without permission or has been staying for five months or more, or if the applicant has already applied for asylum.²¹

These rules were updated in 2018 when the European Parliament and Council agreed to reinforce the Eurodac system. This means that in addition to fingerprints, additional data from applicants are collected, including passport photos and alphanumeric data (name and ID or passport number), and register data in the Eurodac system before a decision on admission is made through the resettlement procedure. In addition, the EU agreed to lowering the age for

²¹ https://ec.europa.eu/home-affairs/what-we-do/policies/asylum/examination-of-applicants_en

obtaining fingerprints and facial images of minors from 14 to 6 years.²² In the new rules, an applicant's fingerprints are also transmitted to The Schengen Information System (SIS). SIS is the most widely used and largest information sharing system for security and border management in Europe.²³

When the Danish Immigration Service has received an applicant's biometrics, the processing of their asylum case begins. If the applicant declines to have their signature and biometric data recorded and stored, the application will not be processed and is rejected by the Danish Immigration Service. If the applicant is granted asylum, biometric data is stored for 10 years by the Immigration Service; if the applicant is not granted asylum, the data is stored for 20 years. The data is deleted if the applicant becomes a Danish citizen.²⁴

If a person applying for asylum is granted a residency permit in Denmark, they are provided with an identity card (or white card) with an embedded microchip storing their biometric features (facial image and fingerprints). A seven-digit personal ID number is also printed on the asylum card, which the police, the Danish Immigration Service, and the asylum center use to identify the applicant. The applicant is required to always carry this card. Within the first two weeks of receiving a residency permit, the applicant is invited to a personal interview concerning their medical health.

4.4 Policy-informed Documents as Data

Data about the conditions in the applicant's country of origin are provided by The Immigration Service's Country of Origin Information Division. The data are retrieved from online reports covering a general or specific human rights situation in a country of origin, newsletters, journals, newspapers, and from a selection of international databases. Individual regional experts gather data through both national and international networks, other stakeholders with specialist knowledge about the area, and by consulting the Danish Ministry of Foreign Affairs, United Nations organizations, and other relevant sources. The data are then published in reports and notes that are passed on to caseworkers in the Immigration Service²⁵.

After the police have conducted their investigation and once the asylum seeker has completed the written application, the case is processed by the Danish Immigration Service. The application is translated, and the applicant's credibility assessed, both in terms of internal consistency and in relation to the array of country of origin data the Danish Immigration Service maintains [48].

A first interview is eventually conducted by a legal representative from Immigration Service at the reception center Sandholm, located in the Capital Region of Denmark, again asking questions regarding identity, nationality, itinerary to Denmark, family, asylum motivation, etc. The average maximum processing time for asylum cases is 120 days.²⁶

²² <https://www.biometricupdate.com/201806/eu-adds-face-photos-to-eurodac-fingerprint-database>

²³ https://ec.europa.eu/home-affairs/what-we-do/policies/borders-and-visas/schengen-information-system_en

²⁴ <https://www.nyidanmark.dk/da/Words%20and%20Concepts%20Front%20Page/Shared/Biometric>

²⁵ <https://www.nyidanmark.dk/en-GB/Words-and-concepts/US/Asylum/Country-information>

²⁶ <https://www.nyidanmark.dk/en-GB/Words-and-concepts/US/Diverse-US/Application-processing-times-in-the-Danish-Immigration-Service>

5 ANALYSIS: DATA AS A LENS FOR UNDERSTANDING WHAT CONSTITUTES CREDIBILITY IN ASYLUM DECISION-MAKING FINDINGS

We now turn to the analysis of how individuals applying for asylum are configured as credible through different forms of data and documentation in asylum decision-making in Denmark. In 6 out of 50 cases where the individual is configured as credible, the data and case documentation has been interpreted by the Danish asylum authorities in favor of the applicant. We learn from the 44 remaining cases, in which the applicants' asylum appeals are rejected, that individuals were configured by the Danish asylum authorities as *non-credible* due to a divergence across: 1) applicants' disclosed "raw" data and the legal authorities' "cleaned" data; 2) records of the different legal authorities; 3) countries' shared data and records; 4) policy-informed background data and the asylum claim; and/ or 5) technology-induced data and the applicants' disclosed data (see figure 2).

5.1 Divergence Across "Raw" Data and "Cleaned" Data

The Danish asylum procedure begins with the applicant's raw data: the disclosed or self-reported data the applicant provides in the asylum application (Fig. 4). Filling in this form is voluntary. If the applicant chooses not to fill out the application form, the applicant "moves" on to the first interview with the Immigration Service without it. If the applicant chooses to fill out the form, this self-reported data will then serve as a starting point for the subsequent case processing. It then serves as baseline data, which is part of the process for categorizing the applicant as either credible or non-credible. These are also the data that come to form the basis for appeals in these cases.

During the first interview, a legal representative from the Immigration Service asks the applicant to elaborate on the information they provided in the application form. The self-reported raw data undergoes a process of interpretation and "cleaning" by the legal representative as this person writes up a summary report. At the end of the interview, an interpreter reads out loud to the applicant this cleaned data, so that the applicant can correct any errors or misunderstandings.

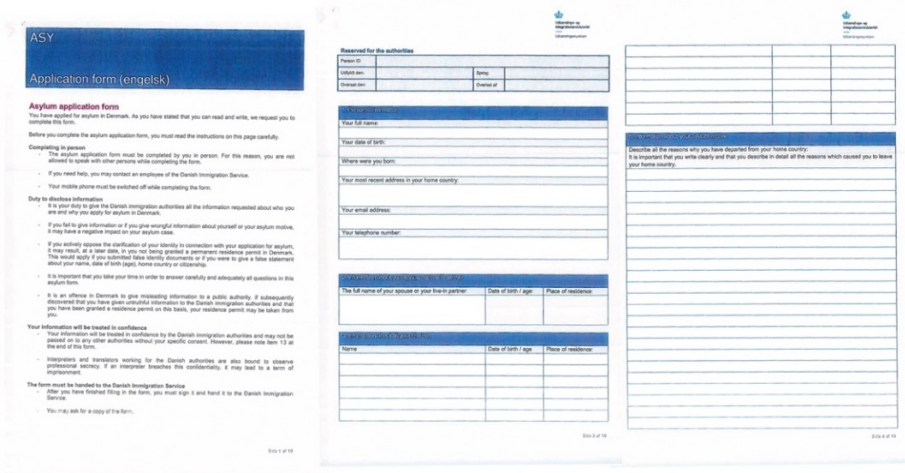


Fig. 4. An excerpt from the asylum application form: three out of ten pages.

As part of the final assessment during the meeting with the Refugee Appeals Board, Board members consider the asylum application form. The Refugee Appeals Board can request elaboration or clarification about any divergent asylum motive explanations that appear in the raw data in the application form, or the cleaned data produced by the Immigration Service. This is illustrated in the following excerpts:

“The Refugee Appeals Board cannot use the applicant's explanation as basis for the asylum motive as the applicant has explained divergently and expansively. The applicant has thus stated in the asylum application form that his parents were captured and killed in 2004. During the asylum interview..., he has explained that his parents were kidnapped and killed in 2002.... He has stated in the asylum application form that the bodies were found after a week on [a] mountain. During the asylum interview, he explained that the bodies were never found.” (Refugee Appeals Board, Demo/2020/11/JHB *translated by the first author*).

“The Refugee Appeals Board has furthermore emphasized that the applicant, in the asylum application form, has stated that he was born in Qout in Iraq, which does not match the applicant's information given to the Danish Immigration Service in the information and motive interview and the asylum interview, and to the Refugee Appeals Board” (Refugee Appeals Board, Iraq/2019/58/HHU *translated by the first author*).

“In his application form [from the summer] of 2012, the claimant stated that al-Shabaab had inflicted a lot of injuries on him, torturing the claimant in an inhuman manner and beating him very hard. Also, the claimant stated that al-Shabaab tortured him because he had fled al-Shabaab many times. In an interview with the Danish Immigration Service [in the summer] of 2017, on the other hand, the claimant explained that he had been beaten with sticks in the training camp because he did not listen. The Refugee Appeals Board finds that the information concerning torture is such a central part of the claimant's asylum motive that the claimant would be expected to have explained this during the interview [in the summer] 2017, if the information was truthful.” (Refugee Appeals Board, Soma/2018/97/EMU *translated by the first author*).

“The Refugee Appeals Board does not find that the claimant's explanation of her conflict with the Syrian authorities can be used as a basis, as it appears constructed for the occasion. The Refugee Appeals Board has emphasized that the claimant has not stated anything about her conflict with the Syrian authorities in the asylum application form.” (Refugee Appeals Board, Syri/2019/1/EMU, *translated by the first author*).

“The Board cannot use the explanations about the subsequent threats as reason. The Board has hereby emphasized that the applicants have explained divergently regarding whether there were only telephone threats, or whether there were both telephone and threats via letter. Furthermore, the male applicant did not make any statements, in his otherwise detailed asylum application form, about these seven threats.” (Refugee Appeals Board, Afgh/2018/220/TBP, *translated by the first author*).

These findings that an applicant is non-credible when their self-reported data does not match the cleaned data raises questions to further explore the asylum application form and the kind of work it is doing: Why is filling out the application form voluntary? What are the consequences if the applicant chooses not to fill out the asylum application form? Could an applicant increase their chances of being deemed non-credible if they choose not to report any data? Does choosing to fill out the asylum application form increase the risk of inconsistencies in the applicant's claim for asylum, potentially harming the applicant's credibility and chance to be granted asylum?

5.2 Divergence Across Records of Legal Authorities

The applicant attends 2-3 interviews with a legal representative from the Immigration Service. If the applicant receives a rejection (a written decision) from the Immigration Service, the case is automatically appealed to the Refugee Appeals Board (See Fig. 3). The Refugee Appeals Board makes its decision through a meeting. Participants at this meeting are the applicant, the three members of the Refugee Appeals Board, one interpreter, one attorney, one representative of the Immigration Service, and one legal officer from the Refugee Appeals Board.

During the asylum decision-making process, we analyzed across the 50 summaries, that these two bodies—the Immigration Service and the Refugee Appeals Board—determine applicants as either credible or non-credible based on whether they provide consistent or contrasting data. This we see illustrated in the following extracts:

“The applicant has explained divergently about how and by whom he was made aware that the Taliban had sought out and searched his residence. In the asylum interview on December 12, 2016, the applicant explained that he was notified in the morning by his father-in-law, who came and told him. During the meeting with the Refugee Appeals Board, he first explained that he was notified by his wife, who called him in the morning, and when he was asked about the divergence, that he was notified by telephone by both his wife and his father-in-law” (Refugee Appeals Board, Afgh/2018/296/JHB, *translated by the first author*).

“The board finally notes that the applicant, during the information and motive interview [in the summer] 2016, has explained that at one point, five people came home to the applicant's residence to get him to join jihad, whereas he has explained to the Refugee Appeals Board that his uncle always came alone. The applicant's explanation about the fact that the five persons – unlike his uncle, were not allowed to enter the residence, cannot lead to a change in the assessment, as this is a not insignificant divergence” (Refugee Appeals Board, Afgh/2018/235/TLNJ, *translated by the first author*).

“The Refugee Appeals Board cannot use the applicant's explanation of being individually persecuted. In this regard, the Refugee Appeals Board places particular emphasis on the fact that the applicant did not explain anything in his asylum application form or during his first conversation with the Danish Immigration Service [in the summer] of 2018 about he being politically active up to the referendum. The Board can thus not assume that the applicant has performed any further activities in

relation to this” (Refugee Appeals Board, Iraq/2019/79/FAM, *translated by* the first author).

“The majority has emphasized that the claimant has explained divergently about his alleged detention with al-Shabaab. At the interview [summer] 2017, the claimant initially stated that the other prisoners were taken out of their cells and beaten, while the claimant was never subjected to such things. Later, during the same conversation, the claimant changed his explanation to the fact that it was he who was whipped and beaten with a rifle. For the Refugee Appeals Board, the claimant has stated that he was not beaten” (Refugee Appeals Board, Syri/2019/1/EMU, *translated by* the first author).

What our findings suggest in these cases are that divergence in the data records across the Immigration Service and the Refugee Appeals Board leads to the determination of applicants as non-credible. We also find that the data that informed these decisions have been produced through, for example, differing interview techniques across the two instances. This suggest to us that the data that informed the decisions are (*following* Pine and Liboiron [34]) imbued with judgments and values that dictate what is collected and what is not depending on the legal asylum authority.

5.3 Divergence Across Countries’ Shared Data and Records

Whether the applicant recognizes the interpretation of data or not, the interpretations by legal authorities affect the decision-making. What we find in the in the following excerpts of decisions, is that the applicant is at risk of being deemed non-credible when the Refugee Appeals Board identifies discrepancies in relation to third party data and records stemming from other countries, where the applicant has previously been registered:

“It is thus stated to the Swedish immigration authorities that he was detained by the Taliban for two years, while he has stated to the Danish authorities that he was detained for about three years” (Refugee Appeals Board, afgh/2019/159/MLVT, *translated by* the first author).

“The Refugee Appeals Board initially notes that the applicant has previously been refused asylum in Norway on a completely different basis, which the applicant could not explain at the Board meeting. He has presented to the Norwegian authorities a document stating an incorrect date of birth.... The applicant explained to both the Norwegian and Danish authorities in 2009 and 2010, respectively, that he was an Iraqi citizen. The information, about the fact that he is a stateless Feyli Kurd is therefore considered an extension that is not further probable.” (Refugee Appeals Board, Iraq/2019/26/JABP, *translated by* the first author).

“The Refugee Appeals Board finds that it weakens the claimant’s credibility as the claimant has explained divergently about the passage of time concerning his departure from Somalia. The applicant has thus explained to the Norwegian authorities in connection with their processing of the applicant’s asylum case in 2010 that she met a human trafficker [one day in the summer] in Mogadishu and that she came to Addis Ababa, Ethiopia, [13 days later] in 2009, from where she [eight days later] flew to Sweden via stopover in an unknown country. The claimant has further explained that

she landed in Sweden [one day in the summer] 2009 and that she traveled directly to Oslo by train. However, it should be noted that it can be established via Eurodac that the applicant crossed the border into Greece [at the end of] 2008” (Refugee Appeals Board, Soma/2017/28/ATN, *translated by* the first author).

The data traces produced across multiple countries intersect and datify the individual, these excerpts demonstrate. Here the applicants might not have been aware of the production of certain data. At the same time opting out of this datified process is obviously not an option when applying for asylum. Whether the applicant recognizes the data or not, this datification affect credibility determinations and thus whether the applicant is granted asylum or not. The non-/credible refugee is constructed via produced, cleaned, contested, and interpreted data, not only in Denmark, but also across country borders.

5.4 Divergence Across Policy-informed Background Data and the Asylum Claim

The assessment of whether an individual should be granted asylum supposes knowledge of the applicant's home country or country of residence. The Refugee Appeals Board accesses policy-informed data from various background material in form of reports and notes provided by e.g., the Ministry of Foreign Affairs and the Danish Immigration Service to construct this knowledge, we learn from the following excerpts. This policy-informed data is also obtained from various organizations, for example, the Danish Refugee Council, Amnesty International, and other international human rights organizations, as well as UNHCR. The Board also refers to other countries' authorities and to some extent articles from international journals.²⁷

“It should be noted that the available background information shows that human trafficking has been criminalized in Morocco and that the Moroccan authorities are seeking to provide protection to persons who have been exposed to human trafficking. There are referenced a report published by the United States Department of State, Trafficking in Persons Report - Morocco, dated June 28, 2018. The e-mail submitted by the applicant's lawyer of [spring] 2019 from the International Organization for Migration to the Center against Human Trafficking, cannot lead to a different assessment.” (Refugee Appeals Board, maro/2019/4/mme, *translated by* the first author).

“...with reference to the applicant's general unreliability, [the Board] cannot assume that the documents are genuine and therefore find no reason to accede to the request for adjournment of the case on authentication of the documents. In this connection, reference is also made to the background information, including Landinfo's thematic note: “Afghanistan: Tazkera, passports and other ID documents” of 24 April 2017 about the fact that it is easy to obtain forged documents in Afghanistan” (Refugee Appeals Board, Afgh2018/312/SND, *translated by* the first author).

“According to the Refugee Appeal Board's background information on the possibility of obtaining false documents in Afghanistan, it cannot be assumed that the threatening letters are genuine.... The general security situation in Afghanistan is not of such a nature that anyone, by his or her mere presence, would be at risk of abuse covered by

Article 3 of the European Convention on Human Rights” (Refugee Appeals Board, Afgh/2018/296/JHB, *translated by* the first author).

We find in these cases that the Refugees Appeals Board compare policy-informed background data with the applicant’s claim for asylum. In all three cases, the Board reach the conclusion of divergence across data. They show that the applicant is construed through interpreted data points across nation states, international organizations, and NGO’s. Hence, when the cleaning and interpretation of these various policy-informed data points does not align, the applicant is configured as non-credible.

5.5 Technology-induced Data Informing Credibility

Technology-induced data (e.g., data from private mobile phones and social media accounts) can be triangulated with other types of data to determine the applicant’s credibility. Upon arrival in Denmark, the Danish police occasionally seize mobile phones from people applying for asylum and downloaded content from them (e.g., photos, videos, contact lists, apps). This data can then later be interpreted by the Danish Immigration Service to assess the applicants’ identity, nationality, and testimony²⁸.

“There may be a lot of information on the phones of a personal nature that is irrelevant to the authorities, but our primary focus is to ensure that those [individuals] we are facing are who they claim to be. And the more material you have to support or disprove it, the better”²⁹ (*translated by* the first author).

A prior study [2] shows that the Danish Refugees Appeals Board uses data from individuals’ private mobile phones and social media accounts (e.g., Facebook) as evidence to either confirm or disconfirm the applicant’s credibility; we found this in 3 out of the 50 cases we analyzed. In the example below, the Danish Immigration Service collected data from an applicant’s Facebook profile and cross-examined it with the applicant’s self-reported data. The non-credible refugee again is configured when these two types of data points contradict each other, as we see illustrated in the below transcript:

“During the interview [in the spring] 2018 at the Danish Immigration Service, the applicant was given information from his own and his spouse’s Facebook profiles, from which it appeared that they had been married [in the winter] 2016. The applicant explained that the date did not fit and that it had to be a mistake” (Refugee Appeals Board, Egyp/2019/2/CMA, *translated by* the first author).

In the following example, the Refugees Appeals Board found contradictory data between video material and biometric data, finding that the lack of physical scars and documentation of mental injuries justifies suspicion towards the applicant’s credibility.

“With regard to the videos and photos that the applicant has presented in connection with the meeting with the Refugee Appeals Board, the Refugee Appeals Board notes that it is not clear from the presented the torture video that it was the applicant who was being tortured. Furthermore, the Refugee Appeals Board notes that it seems

²⁸ <https://www.information.dk/indland/2016/02/hundredvis-asylansoegeres-mobiler-kopieret-politiet>

²⁹ <https://www.information.dk/indland/2016/02/hundredvis-asylansoegeres-mobiler-kopieret-politiet>

striking that the applicant should not have gotten any physical scars, cf. the applicant's explanation, after such very violent torture as the person in the video presented, had been and was subjected to, and that the applicant has not given any information regarding mental injuries as a result of this violent torture.” (Refugee Appeals Board, Iraq/2019/58/HHU, *translated by the first author*).

We find that data from individuals' private mobile phones and social media accounts (e.g., Facebook) are only mentioned in relation to the applicant's credibility in a small number of cases (3 of 50 cases). In the example where the applicant is configured as non-credible when the Refugees Appeals Board interpret the technology-induced data (e.g., the torture video presented by the applicant in a meeting with the board), the expectation of other forms of data and documentation of, in this case, physical scars from the torture, are brought into the decision on the applicant's credibility.

6 DISCUSSION: WHAT CONSTITUTES A 'CREDIBLE REFUGEE' FROM A DATA PERSPECTIVE?

This paper explores asylum decision-making from a data perspective. We investigate cases where the individuals are not granted asylum, focusing on the possible ways that data can formally enter asylum decision-making. Our findings confirm what others have established before us: that nation states, international society, and NGOs increasingly trace and act upon data [40]. This has implications for the design of CSCW-technologies for support of asylum decision-making; when international schemes (e.g., the UNHCR Handbook) are not providing concrete definitions or guidance on these matters to nation states, the data practices encoded into a country's decision-making processes are key to investigate. Whether the applicant recognizes these data practices or not, the resulting categorizations will affect the decision-making, we argue.

6.1 Situating Data in Context

If data science techniques, such as ML, are to be applied to advance asylum law, we as researchers must ask critical questions about how the displaced individual is construed by data into a non-/credible applicant. Data has inherent biases as “[...] bias enters through the backdoor of design optimization in which the humans who create the algorithms are hidden from view” [4 pp. 11]. Also, authorities and decision-makers are human, after all [9, 25]. An uncritical trust in large-scale datasets and data science risks reproducing bias and intensifying well-documented issues of discrimination, inequality, and injustice in legal and political contexts [4].

Credibility is construed in asylum decision-making in all 50 cases that we analyzed. Little is known about the steps and processes where certain data are not being considered as part of the asylum decision. This opens space for future research to ask questions concerning basic democratic values in the case of asylum: How can we design collaborative technologies that enable processes that serve values of accountability and agency so that data points represent the individual applying for asylum?

With the rising development of more complex data practices, the challenges of applicants' agency and accountability grow, especially in bureaucratic decision-making processes where individuals and legal authorities have differential power.

Contextual and political factors affect data production, and thus new approaches to research that explicitly and directly contend with these factors are required [15]. Davis [14] and others show how data-driven tools tend to skew the power balance to the advantage of those designing and implementing such tools. Paradoxically, data is the most de-glamorized aspect of the application of data science techniques like ML [13], and so far, data practices are mainly setup for authorities to exercise discretion in the individual applicant's case, our findings suggest.

If we are to design data-driven technologies to support the asylum decision-making process, these are factors to consider. Thus, in the next section, we continue to discuss what constitutes credibility in asylum decision-making and the role of discretion.

6.2 Credibility as a Form of Discretion

International law, particularly the conventions that apply to asylum, makes no mention of credibility. Nevertheless, prior studies have shown that rejections of asylum are often granted specifically due to doubts about an applicant's credibility [e.g., 49]. If an application for asylum is assessed as credible and the described experiences and/or fear of being persecuted applies with current interpretations of the Refugee Convention, asylum is granted.

Legal tradition in the asylum context prescribes a strong focus on applicant testimonies and motives. Judges' practices have been described as a "random process" [35] and questionable when compared to principles of law.

Credibility forms a discretionary space of the asylum decision-making process. For an applicant to present as credible can be challenging, as in many cases the applicants often have little more to share with legal government officials than their own testimony [13]. Asylum decision-making involves an assessment of credibility, which the Refugee Appeals Board interprets as the applicant having explained consistently and coherently their personal motive and fear of being persecuted and whether their explanation seems probable and self-experienced. It also involves a judgement about whether the information given by the person seeking asylum, if true, would render the applicant eligible for asylum under Danish law. Such narratives enter databased systems and become the basis for the practical administration of the Refugee Convention across countries. As a result, the credibility of the individual applying for asylum and the credibility assessment have become core elements of the asylum decision-making procedure in Denmark [13, 39, 48].

In this sense, the broader implication of this research relates to the emerging role of various forms of data that inform caseworker systems where credibility is enacted as a category. In CSCW and broader HCI, we recognize that categories tend to be much blurrier (e.g., subtle categorization [23]) than we might first think, which complicates the design of data-driven technologies where both NGOs and nation states are stakeholders.

Despite decades of regional harmonization and international jurisprudence, the chance of receiving asylum for people from the same country or groups varies across Nordic and European countries. For example, in 2018 Somali applicants had an 8% chance of receiving asylum at the first instance in Denmark, as compared to 34% in Norway and 48% in Sweden [20, 21]. Inconsistent decision-making challenges the idea of the asylum seeker and credibility as straightforward categories.

Contributing to emerging agendas in CSCW and the broader HCI community on how research communities can respond to the refugee crisis [1, 42, 43, 44, 45], we set out in this paper to qualitatively investigate the formal data practices informing asylum decision-making in Denmark and what constitutes credibility from a data perspective. In particular, asylum

decision makers' cleaning and interpretation of testimonies are sensitive to the heightened downstream impact that we recognize from ML and other data science techniques. Future research can consider how to mitigate the burden on the asylum seeker built into asylum decision-making and allow such data to still influence appeals cases as new types of data become available.

7 CONCLUSION

In the process of determining the identity and credibility of the applicant and whether there is a well-founded fear of persecution upon returning to the home country of origin, there is an increasing pursuit by nation states, international organizations, and NGOs to gather and share as many data points as possible about the applicant [29, 46]. These data points, that are being cleaned and interpreted across stakeholders, datify the individual and are used to inform asylum decision-making. Data and data-driven technologies are increasingly becoming an institutionalized measure to inform credibility in asylum decision-making, but qualitative studies are few probably due to the secrecy of the appeals process.

Since credibility plays a major role in asylum decision-making, this paper aims to qualitatively investigate the formal data practices that inform the process in Denmark. We ask: *How are individuals applying for asylum configured as credible through different forms of data and documentation in asylum decision-making in Denmark?*

We investigated this question as part of an interdisciplinary research project: Data Science for Asylum Legal Landscaping (DATA4ALL)³⁰. The paper contributes a study of publicly available summaries of 50 asylum cases processed by the Refugee Appeals Board between 2017 and 2020. Applying data as a lens, we show how the individual applicant is constituted or determined as credible through the data practices of asylum decision-making.

We find that credibility is central for configuring displaced individuals in all 50 cases into asylum seekers. Most cases show that asylum decision-making involves the Refugees Appeals Board assessing whether the applicant has consistently and coherently explained their personal motive and fear of being persecuted and whether their explanation seems probable and self-experienced.

Furthermore, we find that data and categorization from asylum adjudications stem from a complex and cooperative decision-making practice. In this context, we learn that data needs to be prepared for the asylum decision-making processes through various steps of interpretation by different asylum authorities.

Lastly, we find that data can be used as a lens to explore decision-making processes, where access to studying the cooperative data work is limited.

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³⁰ <https://asylumdata.ku.dk/research/data-science-for-asylum-legal-landscaping-data4all/>

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