Submission date: 03.07.2024

Word count: 11,910

# **Biometric Borders and Minors' Rights**

# A critical analysis of European Migration Management under the new Eurodac Regulation

By

Mona Alexandra Riedl

1<sup>st</sup> Supervisor: Dr. Azadeh Akbari

2<sup>nd</sup> Supervisor: Dr. Ringo Ossewaarde

Public Governance across Borders (BSc.)

**Universiteit Twente** 

Enschede, Netherlands

Universität Münster

Münster, Germany

## Abstract

This thesis critically examines the 2024 Eurodac Regulation and the consequent expansion of the collection of biometric data on minors within EU migration management. The original objective of the Eurodac system, which was designed to facilitate the effective implementation of the Dublin Regulation, has shifted towards security and control considerations. This transformation of Eurodac raises concerns about the socio-political implications of the policy and its ramification on the fundamental rights of minors. Therefore, this thesis examines the implications of the expanded collection of minors' biometric data for EU migration management, with particular consideration of the constraints to the fundamental rights of children. To address this research question, a qualitative approach, which included expert interviews and a qualitative content analysis of the relevant policy documents, was used.

The research revealed several significant shortcomings in decision-making, like missing impact assessments, a tendency towards techno-solutionism, and a lack of transparency during legislation. Furthermore, the investigations have revealed significant violations of minors' fundamental rights and a further securitization of the Digital Fortress Europe. The findings indicate a need to prioritize the protection of the fundamental rights for everyone over considerations of security and surveillance in EU migration management.

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**Abbreviations** 

AFSJ Area of Freedom, Security and Justice

AMMR Asylum and Migration Management Regulation

CEAS Common European Asylum System

CIR Common Identity Repository

CSO Civil Society Organization

UN United Nations

UNCRC United Nations Convention on the Rights of the Child

CFSP Common Foreign and Security Policy

ECRIS-TCN European Criminal Records Information System for Third

**Country Nationals** 

EES Entry/Exit System

EU European Union

eu-LISA European Union Agency for the Operational Management

of Large-Scale IT Systems in the Area of Freedom,

Security and Justice

European Asylum Dactyloscopy

European Union Agency for Law Enforcement

Cooperation

ETIAS European Travel Information System

GDPR General Data Protection Regulation

MEP Member of the European Parliament

NGO Non-Governmental Organization

SIS Schengen Information System

SQ Sub-question

TEU Treaty of the European Union

TFEU Treaty on the Functioning of the European Union

UN United Nations

VIS Visa Information System

# 1 Introduction

#### 1.1 Context and Problem Definition

In April 2024 the Council of the European Union and the Parliament adopted the legislative instruments of the Commissions New Pact on Migration and Asylum. As part of this, the scope of the Eurodac Regulation was broadened significantly. Initially, the European Dactyloscopy Database (Eurodac) was created to set up a database for asylum procedures, in 2003. It was strongly linked to the Dublin System, now regulated under the Asylum and Migration Management Regulation (AMMR). The Dublin System aims to "[..] establish the State responsible for examining [an] application [for international protection], and clarifies the rules governing the relations between states." (Migration and Home Affairs, 2024). The responsibility for an asylum application is currently based primarily on the state of first entry of the applicant, apart from extraordinary situation.

It is the responsible database for processing and comparing the biometric data that is being collected by member states to identify a person and determine the member state in charge for an asylum procedure. Therefore, it can be understood as a biometric border technology, which facilitates the identification and tracking of third-country nationals and stateless persons throughout the EU. Within two attempts, including a Eurodac recast Regulation Proposal in 2016 and an Amended Proposal in 2020, the EU succeeded to pass the new legislative foundation of Eurodac. The lowering of the age of registration from fourteen to six years is one of the major subsequent changes of the system. Further modifications include the inclusion of facial images as an additional form of biometrics, and the reorganization of several databases of migration control and crime control to be interoperable as part of the Interoperability Regulation.

Even before the Extension of Eurodac, it is infringements on the fundamental rights of the populations affected, as well as privacy concerns, were repeatedly pointed out by academic scholars. After the release of especially the Eurodac recast Proposal in 2016, the European Union Agency for Fundamental Rights furthermore identified impacts on the legal position of minors in several dimensions (European Union Agency for Fundamental Rights, 2016). This poses question about the objectives and consequences of the expanded collection of children's biometrics.

Therefore, the focus of this thesis will be the collection and storage of biometric data of minors. According to the Eurodac Regulation "child' or 'minor' describes a third-country national or a stateless person below the age of 18 years" (2024/1358, 2024/EN Art. 2 (z)). As recognized by the UN Convention of the Rights of the Child "the child, by reason of his physical and mental immaturity, needs special safeguards and care, including appropriate legal protection [...]" (Preamble, UNCRC, 1989). Hence, they make up an especially vulnerable group and require a higher level of protection. The EU acquis of asylum policies acknowledges this by considering minors as being children before migrants (Marcu, 2021), imposing an obligation of child protection in migration. Until now it is unclear, whether the EU succeed in fulfilling this obligation designed the Regulation in a Child friendly manner.

#### 1.2 Research Aim and Research Question

The research aims to explore the broader societal impacts of the amended Eurodac Regulation by examining the objectives, methods, and consequences of the biometric data collection. The goal of the paper is to deepen our understanding of the rationale behind the deployment of such biometric border technologies, the impact this has on the fundamental rights of children, and from there, conclude the implications this holds for EU migration management. By expanding the scope of data collection from fingerprints to facial images this policy change highlights a trend towards a data-driven governance, framed as a matter of technical necessity and security. This research critically assesses the socio-political implications of the decision, contributing valuable insights to policy discourse.

The paper addresses the following research question:

What are the implications of the expanded collection of minors' biometric data for the EU migration management, considering the constraints to the fundamental rights of the child.

To explore this question, three sub-questions will be addressed. Those help structuring the analysis, by firstly addressing the objectives of data collection, and assessing the Suitability of Eurodac as a tool. Secondly, possible alternative means and the decision-making process will be investigated, and finally, the ramifications of the Regulation on the Fundamental Rights of minors will be examined. This will contribute to a wholistic understanding of the broader context of the decision-making and contribute to a comprehensive situation of Eurodac and its implications in EU migration management. The sub-questions are formulated as followed:

- 1) What are the objectives in European migration management motivating the data gathering of refugees and minors, and how does the expanded collection of minors' biometric data contribute to the achievement of the set-out objectives?
- 2) Were alternative means discussed, and if so, why was the expanded collection of biometric data of minors preferred over possible alternatives?
- 3) What are the practical ramifications of the expanded gathering of biometric data on minors' fundamental rights, as enshrined in the EU Charter of Fundamental Freedoms?

The scientific relevance is derived from the collective obligation of child protection, as one if the core European Values, established in EU primary law (Doek & Liefaard, 2015, p. 211). This research contributes to an understanding of the decision-making process. Creating public oversight over policy can be considered crucial within democratic systems, to hold policymakers accountable. It counters the Commissions framing of the policy as a merely technical matter, which adds to a narrative of data-driven governance as a question of security and efficiency. This timely issue therefore requires further investigation, to contribute to the policy discourse by examining the socio-political dimensions of the policy decision.

# 2 Conceptual Framework

In the following, the theoretical lens of the thesis is presented. The border as a concept, and biometric borders will be introduced, and the database Eurodac will be situated as a constituent of a biometric border technology. As a result of the Regulation relying on knowledge about a person's age, the practice of age assessment will shortly be addressed for contextualization. After, the concept of technology and its interplay with society will be discussed, to facilitate the analysis of Eurodac's sociopolitical implications. In this context, the concepts 'techno-solutionism' and 'dataveillance' will be introduced.

# 2.1 The Border as a concept

Historically, the border is understood as the territorial demarcation of an administrational entity and their entry gates. As an effect of the globalization, an increased border mobility evolved. However, the experience of debordering, transnationalizing and internationalizing is mostly limited to an elite of frequent travelers (Mau, 2021, pp. 13–14). The daily experiences linked to borders of most parts of the world's population is one of exclusion, re-bordering, and mobility defense. Borders do not only serve the function of control, but also sorting populations into groups that may, or may-not pass, filtering and regulating mobility and spatial segregation (Mau, 2021, 14, 18).

#### 2.1.1 Biometric borders

Within the Schengen area borders were mostly demolished and border controls removed. Conversely, the external borders of the Schengen area are undergoing a trend of border fortification (Hassner & Wittenberg, 2015; Korte, 2021). This fortification comes hand in hand with the introduction of new border technologies, building the smart border (Amoore, 2006; Gülzau et al., 2021).

Eurodac can be understood as such a technology, which introduces the use of biometrics to border controls. The body is thereby considered as a source of absolute identification (van der Ploeg, 1999). This contributes to the bordering process to be one of sorting, othering and categorization (Newman, 2006). Populations, that cross land borders are now identifiable, even after they entered the territory. They are being subjected to a new form of surveillance and sorting (Lyon, 2005), not only at the geographical location of the border, but their bodies constitute their non-belonging onto the territory. Biometrics are being used to govern mobility and enclosure of bodies (Lyon, 2005). Scholars described this phenomenon as "La frontera portáil is everywhere" (Dear & Lucero, 2005, p. 317) and establish an understanding of the Body as the carrier of the border (Amoore, 2006, p. 348). Sachar and Mahmood even went so far as to call it "Body as the Border" (2021).

The trend of deploying digital technologies, like biometric data, started through the reframing of the war on terror as a matter of risk management after 9/11 (Amoore, 2006, p. 337). It serves a narrative depicting migrants as a problem to be solved with technical solutions (Amelung, 2021, p. 153). At the same time, the convergence of migration policy and crime or terror control policy feeds narratives as the Immigrant Terrorist (Amoore, 2006, p. 348) and the "illegal alien" (Genova, 2002, p. 436). The immigration process includes categorizing populations into different levels of risk

(Amoore, 2006, p. 339) and comes with a generalized criminal suspicion against migrants seeking protection (Amelung, 2021, p. 153). Franko describes this trend of converging those preciously distinct policy areas as crimmigration, depicting the people affected as the "Crimmigrant other" (2020). The introduced Interoperability Regulation of the European Union can be interpreted as a manifestation of exactly this, merging Immigration databases, such as Eurodac, with databases for crime control within the new Common Identity Repository (CIR) (Blasi Casagran, 2021; Jones, 2020). This merging will be further elaborated within the chapter regarding the Area of Freedom, Security and Justice in the legal framework.

#### 2.1.2 Eurodac in border management

Already the expansion of Eurodac to cover not only (1) applicants for international protection, but also (2) illegally staying third-country nationals and stateless persons, and (3) people crossing the borders irregularly, was criticized by Brouwer (2002) for the missing connection between the latter two groups and the enactment of the Dublin System. Simultaneously, the type of data stored within the database rose significantly throughout the recent years. The great expansion of the Eurodac in these dimensions, marks a transformation of the database away from its primary purpose to a digital explosion (Queiroz, 2019, p. 158). It entails problems with the principle of purpose limitation, exposing a function creep (Brom & Besters, 2010). This is also visible through the enhanced accessibility of law enforcement authorities to the database, and the newly introduced purposes of fighting terrorism and crime through Eurodac. Moreover, the great expansion of purpose, data and people covered raised concerns regarding necessity and proportionality, as well as worries about violations of the principle of non-discrimination (Queiroz, 2019, p. 170).

A major factor causing problems is, that the system relies on biometric algorithms, that transform a person's biological traits into a digital representation in the form of a template (Magnet, 2011, p. 21), which is based on pattern recognition (Jain et al., 2004, p. 4). During this process errors can occur, as not all fingerprints are recognized, especially from children (Brom & Besters, 2010). Therefore, fingerprints are critical in regards of their reliability and uncertainty (Amelung, 2021, p. 159; van der Ploeg, 1999). The performance of facial-recognition algorithms shows similar problems and is found to have a negative bias and considerable degradation in performance when used on children (Marcu, 2021). The European Court of Human Rights previously recognized, that biometric data contains unique information about an individual, capable of affecting their private life (S. and Marper v. the United Kingdom, 2008). Hence, failures within the Eurodac procedures can negatively affect the legal position of the subjects (Queiroz, 2019). Furthermore, in the past populations registered in Eurodac tended to struggle with missing information and understanding over the process, a lack of control over their own data and missing opt-out possibilities (Amelung, 2021, p. 127).

#### 2.1.3 Age assessment

Many people arriving on EU territory to apply for international protection do not carry identification documents, making it difficult to determine their age. This is relevant, since the age is a major determinant in the legal position and treatment of a migrant (Sauer et al., 2016). As a result, it became a common practice to conduct age

assessments through medical procedures (Mets, 2021; Sauer et al., 2016). For Eurodac the age of six marks the line for registration and eighteen marks the applicability of special provisions regarding minors. The EU Screening Regulation allows for age assessment, the concrete design, however, is a matter of national legislation. Often, x-rays, or dental assessments, linked to the development of the bone structure, are used to determine a child's maturity. Even though it is not directly addressed by Eurodac, it can be considered a ramification of the Regulation.

Linked to age assessment practices, several ethical, medical, and legal questions arise. Common problems are associated with the reliability of the assessment (Malmqvist et al., 2018) and the missing medical necessity of the intervention, especially in regards of the degree of invasiveness of the procedures and their possible health impacts. Additionally, problems of informed consent, the violation of the confidentiality of physicians, as well as the inability to equate the concept of age with the maturity of a person, prevail (Sauer et al., 2016). Dijstelbloem (2020) even argues, that the practice affects the discretionary power of civil servants, on the one hand, and adds to greater stigmatization, exclusion and discrimination of the children, on the other hand. Furthermore, it creates inequalities and risks concerning migrants integrity, their bodies, privacy and the protection of their personal sphere (Dijstelbloem, 2020).

## 2.2 Technology

Due to the increased importance of technologies in contemporary border management, it is crucial to establish an understanding of the concept 'technology'. In the following, technology and its interrelation with society will be discussed.

#### 2.2.1 Technology and techno-solutionism

According to Dijstelbloem (2021, p. 9) "the term technology not only alludes to the technical aspects of devices— tools, materials, machines, instruments, and computer networks— but how they are designed, produced, and managed. Technologies inform— and limit— how societies are governed and can be imagined to be governed". This implies that in contrast to the central western instrumental approach of technology, which understands technologies as neutral (Müller, 2016; Schatzberg, 2018), technologies have a political dimension and are in a relationship of mutual influence with political ideas, decisions and knowledge (Dijstelbloem, 2021). Technologies therefore have a consequence on "how we organize our societies and perceive both ourselves as individuals and as parts of a society" (Sætra, 2023, p. 13).

The development of offering a technical solution to social phenomena is not limited to border management, but a pattern within many policy fields and discourses. Examples are the approach of green technology to solve climate change related problems, or the rising use of technology and increased data gathering in providing humanitarian aid (Metcalfe & Dencik, 2019). Scholars describe this approach to governance as 'technosolutionism' (Sætra, 2022; Winner, 1977). This builds on the idea of 'technological fixes' (Drengson, 1984) for societal challenges, and results in complex socio-technical systems (Winner, 1977). Morozov (2013) argues that this can be understood as more than simply faith in technology, but a change in perception and analysis of social phenomena. Instead of bargaining political solutions, we attempt to solve complex

social problems through engineering and technology (Sætra, 2023, pp. 3–4). Thereby, it is important to note that societies and their challenges are characterized through great interdependencies and the deployment of technology causes indirect ripple effects through various social, economic and environmental dimensions (Farley & Smith, 2020; Sætra, 2022).

#### 2.2.2 Dataveillance

Technologies, like Eurodac, that are used to govern societies and people on the move are increasingly relying on big data and the invasive gathering of personal data. This trend is theorized as the concept of 'dataveillance' in literature (Amoore & Goede, 2005). The term describes the development towards surveillance in humanitarianism and security management (Amoore & Goede, 2021). After the events of 9/11, the practice of using technology and big data to predict security threats through algorithms, that rely on suspicion through association, established (Amoore & Goede, 2021). Jeandesboz (2016) observes that even a decade after 9/11 this practice has acquired a momentum of its own, beyond the initial reasoning. Dataveillance now constitutes a central tenet of EU border control policymaking (Jeandesboz, 2016, pp. 292–293).

# 3 Legal Framework

In the following chapter, the EU migration and border policy will be introduced, as the legal foundation of the Eurodac Regulation. This includes the area of freedom, security, and justice, as the respective policy area and the system infrastructure of Eurodac. Due to its complexity, a further sub-chapter will familiarize the reader with the legislative process of Eurodac. Furthermore, the fundamental rights, as enshrined in the EU Charter, and relevant data protection provisions are established, as a ground for the analysis of the fundamental right implications of Eurodac.

# 3.1 EU Migration and Border Policy

The Geneva Convention of 1951 firstly establishes the right to ask for international protection for everyone fleeing persecution or serious harm in their own country. This principle is enshrined as the "Right to asylum" in Article 18 of the EU Charter of Fundamental Rights. The EU Migration and Asylum policy is part of the Common Foreign and Security Policy (CFSP), and organized in an intergovernmental manner as a shared responsibility of the EU and the member states. The basis of the European asylum policy is the Common European Asylum System (CEAS). The whole CEAS was restructured by the Commissions New Pact on Migration and Asylum, to ensure the Unions capacity to act in the policy field. The amendment of the Eurodac Regulation was a result of this legislative reorganization. All Regulations within the CEAS are highly interconnected and build up on each other. However, for the scope of this paper, only the Eurodac Regulation will be analyzed in depth.

#### 3.1.1 Area of Freedom, Security and Justice

The EU Immigration and Asylum policy is furthermore linked to the Area of freedom, security and justice, which is enshrined in Article 3(2) of the Treaty of the European Union. The AFSJ is concerned with policies on border checks, asylum and immigration, judicial cooperation in civil and criminal matters, and police cooperation (Bux & Maciejewski, 2023).

Eurodac is one out of six data bases within the ASFJ for migration control and crime detection. The databases are the Visa Information System (VIS), the European Travel Information System (ETIAS), the Entry/Exit System (EES), the Schengen Information System (SIS), the European Criminal Records Information System for Third-Country Nationals (ECRIS-TCN), and the Eurodac. All six databases are being operated by eu-LISA and compose the EUs smart border infrastructure. As a result of the Interoperability Regulation 2019/817 and 2019/818 those databases are currently being reorganized to be interconnected and interoperable (Amelung, 2021). In the context of this the Common Identity Repository (CIR) will be set up to store the personal and biometric data of all the previously mentioned databases (Blasi Casagran, 2021; Jones, 2020)

Additionally, the crossmatching of data stored in the different databases and targeted searches for biometric data will be enabled and the access of national and European law enforcement institutions, as well as border controls will be facilitated. This is to support Identity checks and criminal investigations (Blasi Casagran, 2021). Due to the scope of the paper, only the Eurodac database will be further addressed.

#### 3.1.2 Eurodac – System Infrastructure

Both biometric data, covering fingerprints and facial images, and alphanumeric data can be stored within the database. "'Alphanumeric data' means data represented by letters, digits, special characters, space, or punctuation marks" (2024/1358, 2024/EN Art. 2 (t)). The alphanumeric data stored in Eurodac includes name(s), nationality(ies), date and place of birth, sex, information regarding identity documents, asylum application(s) and the potential threat a person poses to internal security (2024/1358, 2024/EN Art. 17).

The member states are obliged to collect this data of all persons of at least six years of age, who are (1) applicants for international protection, (2) illegally staying third-country nationals and stateless persons, or (3) people that cross the external borders irregularly. The fingerprints collected are transmitted from the national access points to the Central Unit of Eurodac, where they are compared against all previously captured datasets on a hit/no hit basis. A 'hit' signifies "[...] the existence of a match or matches established by Eurodac by means of a comparison between biometric data recorded in the computerized central database and those transmitted by a member state with regard to a person [...]" (2024/1358, 2024/EN Art. 2 ((J))). A hit therefore suggests that the same set of fingerprints has been captured before. In this case, a notification is given and the member state of first registration identified. In cases where the comparison of fingerprints is not possible, it is to be relied on the facial image data. Furthermore, all datasets corresponding to the same person are linked to a sequence. Law Enforcement access to the database is likewise operated on a 'hit/no hit' basis.

The datasets of asylum applicants are stored for a period of ten years. In case of a successful application the data is marked and blocked after a period of three years, until erasure. The data of category two and three persons is retained for five years. In case a person attains the citizenship of a member state, a residence permit, or leaves the EU the data is marked until erasure. Marked data can still be accessed through searches. Blocked data is not being transmitted in case of a 'hit'.

#### 3.1.3 Special Provisions Regarding Minors

The Eurodac Regulation furthermore includes special provisions for minors. Article 14 establishes that the collection of minors' biometric data has to be done in a childfriendly and child-sensitive manner and in full respect of the best interest of the child by specifically trained officials (2024/1358, 2024/EN Art. 14). During the registration process, the child must be accompanied by a guardian. In case of uncertainty about a minors age it must be assumed that they are under the age of six (2024/1358, 2024/EN). Furthermore, the Regulation rules that no form of force may be used against minors to ensure their compliance with the obligation to provide biometric data. However, as a last resort, a proportionate degree of coercion may be used against minors to ensure their compliance (2024/1358, 2024/EN). When applying such a proportionate degree of coercion, member states must respect the dignity and physical integrity of the minor (2024/1358, 2024/EN Art. 14 (1)). In case of unaccompanied minors refusing to give their biometric data, they must be referred to national child protection authorities. As concerning the rights of information, "the procedure to capture biometric data shall be explained to minors by using leaflets, infographics or demonstrations, or a combination of any of the three, as appropriate, specifically designed in such a way as to ensure that minors understand it" (2024/1358, 2024/EN Art. 42 (2)).

#### 3.1.4 The legislative process of Eurodac

In 2016 the Commission issued a recast version of Eurodac COM(2016) 272. It was tasked under the European Agenda on Migration as a part of the 2016 CEAS reform, and as a reaction to the migratory flows, entering the EU between 2014-2016. It was launched as a package with several other proposals, in a first attempt to restructure the CEAS.

The 2016 Eurodac Proposal followed the ordinary legislative procedure. Within the European Parliament the Committee of Civil Liberties, Justice and Home Affairs (LIBE) was assigned responsible for the file, the rapporteur in charge was Monika Macovei (ECR, Romania). The LIBE Committee adopted their report on May 30th, 2017, which was confirmed by the Plenary in June 2017. Six interinstitutional negotiations took place between September 2017 and June 2018. A provisional agreement was reached in the trialogue on the 19th of June 2018. "The Parliament and the Council agreed:

- to store in addition to fingerprints, the facial images and alphanumeric data of asylum seekers and irregular migrants.
- to lower the age for obtaining fingerprints and facial images of minors from 14 to 6 years.
- to permit Europol to enquire the database more efficiently.
- to also register persons falling under the Union or national resettlement schemes" (Orav, 2024a).

However, the CEAS reform reached an impasse and the Eurodac file was part of a political deadlock on a political level (Committee on Civil Liberties, Justice and Home Affairs, 2021). Therefore, the Regulation remained as unfinished business during the

2019 election recess and was to be resumed within the next legislative period (Orav, 2024b).

On the 23rd of September 2020, the Commission launched its New Pact on Migration and Asylum as an attempt to overcome the political deadlock of the CEAS reform. As part of this an amended Proposal of the Eurodac Regulation was launched. The 2020 amended Proposal was no longer a recast and the aspects agreed on in 2018 were no longer open to negotiation. It is to point out, that "very few precedents are known to the European Parliament, of an amended Commission Proposal being submitted under the same procedure number after the point where Parliament had already adopted its mandate. In this case, the amended Commission Proposal comes more than two years after a provisional agreement has been reached. [...] This Proposal entails that the future LIBE report on the file would, in general terms, leave the original Commission Proposal untouched and also respect the provisional agreement" (Committee on Civil Liberties, Justice and Home Affairs, 2021, p. 3). Hence, the agreements made during the 2018 trialogue could not be further amended and only the newly proposed changes of the 2020 Proposal were open to negotiations.

The newly appointed Rapporteur within the LIBE Committee of the European Parliament was Jorge Buxadé Villalba (ECR, Spain). The European Parliament Committee in charge remained the same. The text was agreed on in the trialogue on the 14<sup>th</sup> of February 2024, approved by the Parliament on the 10<sup>th</sup> of April 2024 and adopted by the Council on the 14<sup>th</sup> of May 2024 (Legislative Observatory, 2024). The final act was signed the same day. The changes agreed on include the expansion of alphanumeric data stored in Eurodac, Interoperability provisions, solidarity mechanisms, special provisions regarding the preparation of statistics based on Eurodac data, as well as the sequencing of the data stored.

#### 3.2 Fundamental Rights

In the following the fundamental rights of the EU as a normative and legal basis of EU legislation are presented. The key values of the EU are enshrined in Article 2 TEU and include the respect for human dignity, freedom, democracy, equality, the rule of law and the respect for human rights, including the rights of persons belonging to minorities (European Parliament, n.d.). The EU Charter of Fundamental rights builds on this foundation and is consistent with the European convention on human rights. It applies to all EU Institutions in their actions, as well as national authorities, when implementing EU law (European Commission, 2024). It includes all persons within the jurisdiction of the EU and is therefore applicable to both EU citizens and non-EU nationals, including immigrants and asylum seekers. The rights particularly associated with Eurodac are elaborated in the following.

As mentioned before, the right to asylum of Article 18, in connection with the principle of non-refoulement and Article 19, the Protection in the event of removal, set out the core principles regarding asylum policy (326/391, 2012). They ensure protection in accordance with the Geneva Convention and prevent collective expulsions and the return of refugees to states where they face serious threats to their life and, or, dignity (326/391, 2012).

The first chapter of the Charter covers all rights relating to dignity. Article 1 constitutes that "Human dignity is inviolable. It must be respected and protected" (326/391, 2012). Furthermore, Article 2 to 4 include the right to life, the right to the integrity of the person, including physical and mental integrity and the prohibition of torture and inhumane or degrading treatment or punishment (326/391, 2012). This set of rights is especially relevant for Eurodac considering the data gathering process (Marcu, 2021).

Article 20 manifests equality before the law, of all persons. Article 21 furthermore adds the principle of Non-discrimination, based on "[...] any ground such as sex, race, color, ethnic or social origin, genetic features, language, religion or belief, political or any other opinion, membership of a national minority, property, birth, disability, age or sexual orientation [...]" (326/391, 2012 Art. 21 (1)), as well as "[...] on grounds of nationality [...]" (326/391, 2012 Art. 21 (2)). Hence, this results in a requirement for equal treatment of migrants and asylum seekers. The collection of biometric data is, however, connected to algorithmic biases resulting in possible discrimination and stigmatization of populations (Bredström et al., 2022).

Article 7, the respect for private and family life, establishes the sphere of privacy and its protection (326/391, 2012). Article 8,the protection of personal data, in connection with the GDPR (Regulation 2016/679), sets down guidelines for the procession of personal data in seven principles. The first principle of the GDPR concerns lawfulness, fairness, and transparency. The second principle ensures purpose limitation. Both provide for the need that the data subject fully complies and understands the reason for the procession of their personal data (GDPR EU, 2024). The second principle moreover establishes, that the data can only processed for the reason communicated (GDPR EU, 2024). The third principle, data minimization, demands that the minimum amount of data necessary to meet the purpose is the maximum of data that should be held by processors (GDPR EU, 2024). Additionally, data can only be retained for a limited period of time, according to principle four, storage limitation (GDPR EU, 2024). The Principle of Accuracy concerns the data quality and constitutes the right to have inaccurate data corrected (GDPR EU, 2024). Moreover, principle six, integrity and confidentiality, lays down data security (GDPR EU, 2024). The last principle, accountability, requires the processors of personal data to take responsibility of their actions (GDPR EU, 2024). Those provisions are relevant in the case of Eurodac, since Eurodac processes personal data in form of both biometrics and alphanumeric data.

The rights of the child are set out in Article 24:

- "(1) Children shall have the right to such protection and care as is necessary for their well-being. They may express their views freely. Such views shall be taken into consideration on matters which concern them in accordance with their age and maturity.
- (2) In all actions relating to children, whether taken by public authorities or private institutions, the child's best interests must be a primary consideration.
- (3) Every child shall have the right to maintain on a regular basis a personal relationship and direct contact with both his or her parents, unless that is contrary to his or her interests" (326/391, 2012 Art. 24).

Hence, Article 24 establishes the best interest for the child. However, the concept remains abstract (Mets, 2021, p. 627). Although, the EU is not a party of the UN

Convention on the rights of the child, the treaty is used as a point of referral concerning this Article (Mets, 2021). The UNCRC therefore has an impact on Union law and stipulates the best interest of the child (UNCRC, 1989Art. 3), as well as provisions regarding nondiscrimination (Article 2), the right to survival and development (Article 6) and the right to be heard (Article 12) (Mets, 2021; UNCRC, 1989). The consideration of the rights of the child are especially important when looking at Eurodac, since control and deterrence may disproportionally affect fundamental rights of unaccompanied minors (Mets, 2021). Also because the retention of their data may affect Childrens' lives, although they did not participate in their parents' decision to migrate (European Union Agency for Fundamental Rights, 2016).

# 4 Methodology

The thesis follows an exploratory design, looking at the implications of the Eurodac reform on European Migration and Asylum policy. The approach is qualitative and involves examining the situation from various angles to acquire a nuanced understanding of the relationship between biometric data, migration management objectives, and the impact on minors' fundamental rights. This suggests a qualitative research approach for this study, to capture the complexity and multi-dimensionality of the research question and the sub-questions. Therefore, five qualitative Expert Interviews were conducted, in combination with a qualitative content analysis. Next to that, the Commission's Explanatory Memoranda of the 2016 recast Proposal and the 2020 amended Proposal will be analyzed. This is because the Commission sets out the major objectives of a Regulation within the explanatory memorandum.

The interviews and explanatory memoranda will serve as primary sources to answer all three sub-questions. It is important to note that the third sub-question investigates on children's rights implications. This could have been addressed through a legal analysis, but due to the scope of the research, including time and resources available, I will rely on expert information on the matter.

To conclude the main research question, the findings of the sub-questions will be analyzed through the lens of the theory. I expect to find a further securitization of immigration policy, an expanded crimmigration narrative and reduced safeguards of children's fundamental rights in asylum and migration policy. Next to that I expect to find a reasoning focused on techno-solutionism and a disproportionate level of fundamental right violations of minors, compared to the reasoning behind the expanded procession of their biometric data.

#### 4.1 Expert Interviews

The Expert Interview is a kind of semi-structured Interview technique, that derived its name from the group of people interviewed (Misoch, 2019, p. 119). Experts Interviews are special, as they are not asking about the person talking itself, but more specifically try to make sense of the knowledge a person holds (Misoch, 2019). Therefore, it is important to define, who counts as an expert. The aim is to create contextual knowledge about the policy-making process and its rationales, as well as the implications for minors' fundamental rights. Therefore the requirement to count as an expert for this thesis was either (1) the person worked on the Eurodac Proposal file

within an institution that was involved in the policy-making, or (2) the person is involved in research, or involved as a policy consultant regarding Eurodac, within an Institutional framework. For this research, about 60 Experts were contacted in total, including Members of the European Parliament and their policy advisors, as well as representatives of NGOs. The determining factor, weather MEP or their policy advisor was contacted, was their membership within the LIBE Committee and their specialization in the field of migration policy. For policy advisors, an additional factor was, if they were mentioned on the MEP's websites, and therefore identifiable. For NGOs, the determining factor was if they had previously published any reports, statements, etc. concerning Eurodac and if their field of interest is either Child protection, or Human Rights. In total, five interviews were conducted. The interviews will be fully anonymized to protect the interviewees privacy and personal data. However, table one gives an overview about the Institutional positions of the interviewees to better demonstrate their Expertise on the matter.

Interview	Poition
Interview 1	Parliamentary Assistant of a Shadow Rapporteur of Eurodac in the European Parliament
Interview 2	Expert and Researcher in Human Rights and Surveillance, specialized in the development of Eurodac
Interview 3	Policy Advisor at the European Parliament, specialized in Migration and Asylum policy
Interview 4	Policy Advisor at the European Parliament, specialized in Migration and Asylum policy
Interview 5	Expert in child rights and migration, currently employee of Save the Children

Table 1: Interviewees and their institutional position

To develop the Interview questions, pre-defined relevant topics were derived from the research question, and formulated as open questions (Misoch, 2019). From this, a guide was created, to structure the interviews and ensure a certain standard of comparability. To guarantee a more natural conversation, the order of the topics and questions was flexible. Only within the first interview the information came up, that great parts of the expansion of Eurodac were not open for negotiations within the 2020 Eurodac Proposal, as they were agreed on in technical negotiations in 2018. This was not clear before, due to the non-transparent handling of the Regulation. As the legislative process of the Regulation was rather exceptional, even the newly appointed Rapporteur Jorge Buxadé Villalba had to "consult[...] the Shadows on the procedural path to be followed in this case [...]" (Committee on Civil Liberties, Justice and Home Affairs, 2021, p. 3). As all interviewees working for the European Parliament joined negotiations after 2018, some of the questions had to be changed. The updated interview guide can be found in Annex I. The consent to the interviews was given orally, and the interviews were conducted face-to-face via teams, online, in both English and German.

## 4.2 Content analysis

The expert interviews were analyzed with a qualitative content analysis. This method was chosen due to the high level of structure it provides for the analysis and therefore facilitates a high level of reliability. The automatic transcription of the team's software was used. The generated transcripts were later reviewed and corrected manually. Only the relevant parts were fully transcribed (Bogner et al., 2002; Misoch, 2019), but in a manner that the full meaning of the interview remained preserved. Three interviews were conducted in German. Those were not translated to English, but analyzed in German, to avoid errors in translation and meaning.

The coding was conducted in a deductive manner according to Mayring (Mayring, 2015). This method enables the testing of concepts and aims to contextualize subjective meanings in a rule-based manner (Mayring, 2015).

The codes were developed both deductively and inductively, according to keywords, themes, issues, and hypothesis, derived from the theory and sub-questions. Firstly, a codebook of deductive codes was developed, which was complemented by inductive codes during the coding-process. The developed codebook, including explanations and examples can be found in Annex II. To ensure consistency, two rounds of coding were carried out. Atlas.ti was used as a tool to facilitate the process. The codes were assigned to categories representing the sub-questions.

The chosen analysis unit was each explanatory memorandum and Interview transcript. The coding unit was defined as a full sentence. Furthermore, it was possible to apply more than one code at a time to the same sentence or paragraph. The context unit was defined as the paragraph surrounding the specific code. For the interviews, the previous Interview question was included in the context unit.

The systematic analysis and interpretation of the data happened both on the level of codes, looking for communalities, divergence, and conflicting points of view, etc., as well as on a level over the themes, generating insights between the themes, identifying relations, and building generalizations (Bogner et al., 2002). The information was thereby integrated within the literature and theory of the given research.

# 5 Analysis

The following analysis will give answers to all three sub questions and aims to provide findings regarding the objectives of Eurodac, the decision-making process, and the implications on the fundamental rights of minors. The findings will be set in context and discussed critically.

#### 5.1 Objectives in migration management for biometric data gathering

This section aims to answer the first sub-question: What are the objectives in European migration management motivating the data gathering of refugees, and minors and how does the expanded collection of minors' biometric data contribute to the achievement of the set-out objectives? In the following, the objectives found will be presented. After their relationship with the collection of biometric data will be discussed and evaluated. A special focus lies on the objective 'child protection,' as it is the official motive of the Eurodac expansion to include minors. Table two shows an

overview of the codes used during the analysis, and their frequencies. A higher frequency of a code does not indicate a higher importance of the objective.

Code	Frequency
Security & Safety	10
Dublin System & Solidarity	12
Limitation of Migration	13
Administrative Benefits	15
Child Protection	19
Control and Monitor	28

Table 2: Codes and Frequencies, SQ1

Overall, 97 citations, covering six objectives were used analyzing the first sub-question. The objectives identified are:

- 1) The effective implementation of **the Dublin Convention**, including the idea of **solidarity** and the fair sharing of responsibility between the member states (2016/0132 (COD), 2020/COM(2020) 614 final).
- 2) Internal security and public safety within the Schengen area and the EU.
- 3) The **limitation of migration.** This includes restrictive measures to discourage migration to the EU (Interview 1), measures to reduce the presence and visibility of asylum seekers and irregular migrants within our societies, and measures supporting the "link between asylum and return" (2016/0133(COD), 2016/COM(2016) 272 final, p. 9),
- 4) **Administrative benefits** and the intention to simplify administrative and technical processes to the benefit of the official authorities working with Eurodac.
- 5) **Child protection**, especially the smuggling and abuse of unaccompanied minors (2016/0132 (COD), 2016/COM(2016) 272 final, p. 13),
- 6) The **monitoring** of individuals and populations on the move, combined with the intention of increased **control** about migration and movements. This encompasses the generation of statistics through the collection of personal data, with the intention of facilitating and automating future decision-making.

**Dublin Convention** In both its 2016 and 2020 Explanatory Memoranda, the Commission reiterates that the primary objective of Eurodac is the effective implementation of the Dublin System. This entails the collection of biometric data with the intention to identify individuals and assigning responsibility for asylum applications to the appropriate member state. Nevertheless, experts coincide that this ceased to be the primary objective, given Eurodac's evolution into a multifunctional database designed for migration control (Interview 3). In contrast to the Commission's assertion that Solidarity is one of the major objectives of the Eurodac 2020 Proposal, no effective and novel mechanism for distribution was agreed upon, resulting in the absence of any further evidence of solidarity. The mere collection of biometric data does not inherently foster solidarity; rather, it serves to facilitate the control of affected populations (Interview 3).

**Security and Safety** Throughout the CEAS reform, a pronounced emphasis on security and safety is evident (Interview 3). This is particularly apparent in the provisions of Eurodac, which include the extensive access of law enforcement to the

database. Such access is intended to identify "third-country nationals who are suspects (or victims) of terrorism or serious crime" (2016/0132 (COD), 2016/COM(2016) 272 final, p. 8). Additionally, Eurodac's interoperability with other crime control databases and the Common Identity Repository (CIR) further underscores this focus (2016/0132 (COD), 2016/COM(2016) 272 final, p. 4). Another key provision is the ability to add security flags to individuals' entries in the database (2016/0132(COD), 2020/COM(2020) 614 final, p. 14).

The inclusion of minors' biometric data in security databases, with storage periods of up to ten years, signifies an expanded securitization approach. This measure follows a narrative that these children might pose security threats as they grow older (Interview 2, p.15). However, this practice extends the general criminal suspicion towards migrants to children between the ages of six and fourteen (Interview 2; Interview 5).

**Limitation of migration** The restriction of migration is further reinforced through the tracking of movements and the imposition of penalties for unauthorized secondary migration (Interview 3). The use of biometric data facilitates the precise identification and monitoring of individuals, thereby enabling the Regulation and control of movements and the application of targeted sanctions. Therefore, the objective is closely linked to the monitoring and control objective. However, the efficacy of deterrence policies, which are also encompassed within this objective, remains questionable as a strategy in migration policy (Interview 1).

Administrative benefits Administrative benefits are anticipated through the collection of biometric data, particularly concerning irregular migrants who employ deceptive means to evade identification and hinder re-documentation (2016/0132 (COD), 2016/COM(2016) 272 final, p. 3). This objective includes the expansion to include facial images and the streamlining of administrative processes (2016/0132 (COD), 2016/COM(2016) 272 final). The rationale behind this measure primarily reflects arguments based on "technical requirements." However, the potential socio-political implications of these measures remain ambiguous (Interview 3; Interview 4).

Child protection The Commission's primary and official justification for collecting biometric data from minors is child protection. The data helps identifying and tracking children, particularly unaccompanied minors, to prevent them from becoming lost or exploited (2016/0132 (COD), 2016/COM(2016) 272 final; 2016/0132 (COD), 2020/COM(2020) 614 final). However, the Commission relied on statistics regarding missing migrant children in the EU to justify the expansion of Eurodac to include minors (Interview 2). National law enforcement agencies have questioned the reliability of these statistics, suggesting that many entries might represent duplicate cases due to repeated registrations in different member states (Interview 2). Furthermore, most unaccompanied minors arriving in the EU are over 14 years old (Interview 3), meaning they do not fall within the primary target group of this expansion. Consequently, the number of children potentially benefiting from the expanded registration is likely to be extremely low compared to the additional minors registered by default.

Nonetheless, one interviewee, who previously worked in a children's rights organization focused on migration, emphasized the importance of ensuring that every child is safe (Interview 5, p.1). Even if the number of beneficiaries is small, the well-

being of children should not be measured in terms of quantity. Therefore, the lack of data on missing children is a problem, as it hinders the ability to identify lost children and underscores the urgent need to improve the registration process for children (Interview 5, p.1).

Eurodac enables the registration of children to improve their identification and tracking, allowing authorities to determine the child's identity, whereabouts, guardians, and safety (Interviews 3; Interview 5). Biometric registration provides a straightforward method for identity matching, however, experts have raised concerns regarding the accuracy and validity of biometric data, especially when performed on children, people of color, or female individuals (Interview 2, p.3). A study conducted by the Commission's Joint Research Center on 'Fingerprint Recognition for Children' indicates that "fingerprints taken from children age six and above can be used in automated matching scenarios such as Eurodac when sufficient care is taken to acquire good quality images" (2016/0132 (COD), 2016/COM(2016) 272 final, p. 4). However, this is linked to several preconditions, such as well-trained personnel and proper equipment. Judging from everyday practices of registration, it is to be assumed that these preconditions will not be met everywhere, such as in Greek or Italian refugee camps (Interview 2, p.5-6). Therefore, problems in the technical implementation are to be expected (Interview 2, p.6).

Other critiques of the measure chosen included that the data stored in Eurodac is insufficient for child tracing purposes, as additional information about protection concerns, family status, special vulnerabilities, and medical needs would be required to ensure proper care for children (Interview 5, p.3). Also, the existing discrepancy between the theory and practice of Eurodac was repeatedly stressed, as the system is open to numerous potential violations (Interview 5, p.2), including the broad access and the missing purpose limitation. Additionally, two interviewees explained, that the fingerprinting might be a traumatic experience for children, especially since they tend to fear authorities, and the use of force is not prevented (Interview 1, p.1; Interview 5).

All experts agreed that child protection is neither the primary purpose of the age expansion nor is the Eurodac system infrastructure appropriate to address this issue. Moreover, safeguards in terms of child protection, like the limitation of the access to minors' data for child protection purposes exclusively, were not realized. Consequently, it must be concluded that the Commission's objective of child protection is an instrumentalized argument to justify the expansion of data gathering for security and control purposes (Interview 2, p. 7-8).

**Monitoring and control** Biometric data facilitates the identification of individuals, thereby enabling precise monitoring, tracking, and targeted assessments (2016/0132 (COD), 2016/COM(2016) 272 final, p. 3), particularly in relation to irregular and secondary migration (2016/0132 (COD), 2016/COM(2016) 272 final, p. 2; 2016/0132 (COD), 2020/COM(2020) 614 final, p. 3). The objective is closely related with the enactment of the Dublin System, as a measure of control and builds the foundation for the achievement to the security and safety objective and the limitation of migration objective.

The monitoring capability of Eurodac supports the development of statistics, which subsequently serve as a foundation for policy formulation and control measures. The anticipated automation of decision-making through algorithms, developed based on these statistics, could lead to problems regarding human oversight. Such automation could severely impact individuals, especially in cases of technical failures (Interview 2). It could potentially result in wrongly decline asylum applications, or similar.

The accumulation of more data allows for greater control over migration. During the interviews, there was broad agreement that migration control is the primary objective of the Regulation. The entire system is designed to limit movement and impose penalties on those who migrate (Interview 3). One interviewee highlighted this by stating, "We can already see this in countries where migration is an active phenomenon, like Greece. And more data is better for this, because then we can be sure who we want to punish. But it is naïve to believe that everything is going to work perfectly. There will be technical failures and that means that other people will also be punished" (Interview 3, p.7).

## 5.2 Decision-making

This section addresses the second sub-question: Were alternative means discussed and if so, why was the expanded collection of biometric data of minors preferred over possible alternatives? To explore this, the alternative means will first be presented. Following this, the decision-making process will be retraced to contextualize the findings and provide a deeper understanding of the considerations during legislation, or potential omissions. Table three gives an overview of the codes used during the analysis, and their frequency. Overall, six codes were used, covering 49 citations.

Code	Frequency
Alternative means discussed in Legislation	3
Stakeholders consulted in legislation	3
Possible alternative means	5
Technical Difficulties	10
Evidence	11
Issues in decision-making	17

Table 3: Codes and Frequencies, SQ2

One factor influencing the findings in this section is the absence of interviews with staff from the Commission or the Council. Additionally, all interviewed staff from the European Parliament (EP) joined after 2018, after the decision on the expanded collection of biometric data. Despite these limitations, valuable insights were obtained, particularly regarding the decision-making process itself.

#### **Alternative Means**

None of the interviewees were able to provide information on whether alternative means to ensure child protection in migration were discussed during the legislation process. Nevertheless, two alternatives to Eurodac were proposed by the interviewees.

(1) The Schengen Information System (SIS) was explored as an alternative database to trace missing children. The SIS is like Eurodac part of the ASFJ and compensates for internal border controls. Within this database, it is possible to

consult alerts on people, based on alphanumeric data. In case of an alert, the person in question can then be located anywhere within the EU and Schengen area during border, police, and other lawful checks (Directorate-General for Migration and Home Affairs, 2024). Therefore, it would not require the preventive and universal registration of children's biometric data (Interviews 2; Interview 5). However, this implies that (a) minors would need to be able to say their names for identification, and (b) searches would be conducted manually, not allowing for typographical errors (Interview 5). Since the target group is six years and older, the first condition should be met in most cases (Interview 2). To ease the second condition and to avoid errors, biometric data could be added to searches in special instances (Interview 2). However, this would involve rather complex procedures (Interview 2).

(2) Another interviewee suggested that since children tend to avoid authorities, "the only way to trace them or to safeguard them, to protect them, is to make them accompanied by social services or social workers" (Interview 1, p. 4). Although this option would be extremely complex and require substantial resources, it has the potential to safeguard children in the most child-friendly manner possible and not rely merely on technologies.

Overall, it remains unclear whether alternative means were discussed in legislation, or why Eurodac turned out to be the favored measure. However, it is safe to say that other means for child protection exist.

# The Decision-making process

The Commission presented both the recast version of Eurodac in 2016 and the amended Proposal in 2020 as merely technical reforms, disregarding the political implications of the proposed changes (Interview 1). Additionally, Eurodac was partly "swollen by the pact" and overshadowed by more novel Regulations proposed simultaneously (Interview 1; Interview 4) resulting in minimal investment in the file from NGOs and other institutions. A staff member of the European Parliament referred to Eurodac as a "cringe file" that no one wanted to deal with, due to its technical nature (Interview 3). The lack of interest in Eurodac has led to a limited awareness of its sociopolitical implications (Interview 1).

A major critique is the Commission's failure to conduct the required impact assessment for the Eurodac recast Proposal (Interviews 1; Interview 2). This omission leaves the consequences of the reform unknown and vague (Interview 1). Additionally, there was no evidence or case studies indicating a positive impact of biometric registrations on child protection (Interviews 1; Interview 4), and minimal research on the technical implementation of Eurodac and its practical implications "on the ground" exists (Interview 2).

The agreements made during the 2018 trialogue, which included lowering the age for obtaining facial images of minors to six years and above, were unofficial and negotiated in camera. Consequently, these agreements were not made public, and no final vote was held (Interview 1). On top of that, the rapporteur at the time, Monica Macovei, made several concessions during the trialogue that had not been previously agreed upon by the Parliament's shadow rapporteurs (Interview 4). This lack of transparency undermines democratic integrity and complicated legislative work (Interview 1). However, similar unofficial agreements were made on other files, where

the Parliament managed to negotiate several concessions. This impacted the Parliament's interest in not reopening negotiations on the agreements made in 2018 but agreeing on the status-quo (Interview 4).

When negotiations reopened in the subsequent legislative period, most MEPs involved were either absent during the first negotiations, or did not recall much, due to the time passed (Interview 4). The appointed Rapporteur, Jorge Buxadé Villalba, a member of a far-right party, attempted to rush the negotiations, disregarding the planned package approach for the New Pact negotiations (Interview 4; Interview 1). Additionally, he did not include Eurodac in the Substitute Impact Assessment of the New Pact within the Parliament (Interview 4).

The 2016 Eurodac recast Proposal included very few consultations and evidence references. Only in the 2020 memorandum, after the age of registration was no longer negotiable, the Commission mentioned "targeted consultations with CSOs, NGOs, IOs like the UNHCR, and national and local organizations" (2016/0132 (COD), 2020/COM(2020) 614 final, pp. 8–9). However, the consulted organizations remain undefined and unknown. The evidence referred to in the 2020 Proposal also remains largely unspecified (2016/0132 (COD), 2020/COM(2020) 614 final, pp. 7–8). The European Union Agency for Fundamental Rights raised concerns about the position of children in their comments. No information about official consultations by the Council or within the LIBE committee regarding the inclusion of children in Eurodac were available.

# 5.3 Implications on the Fundamental Rights of Minors

In the following section, the third sub-question, what are the practical ramifications of the expanded gathering of biometric data on minors' fundamental rights, as enshrined in the EU Charter of Fundamental Rights? will be investigated. Figure four presents the codes used, and their frequency. Overall, three codes were used, covering 48 citations.

Code	Frequency
Vulnerability of Children	3
Commission evaluation of FR	5
Limitation of Fundamental Rights	40

Table 4: Codes and Frequency, SQ3

For the analysis is important to acknowledge that newly arrived migrants, particularly children, are especially vulnerable (Interview 5). Therefore, obligation to protect this group is even higher.

An evaluation by the commission about the fundamental rights implications of the policy is part of the Explanatory Memorandum of the 2016 Eurodac recast Proposal, the same evaluation remains valid for the 2020 amended Proposal (2016/0132 (COD), 2020/COM(2020) 614 final). Within this evaluation, positive effects on the right to liberty and security, the respect for family life, the prohibition of slavery and forced labor, and the rights of the child, is estimated. Furthermore, an implication on the right to asylum, the protection in event of removal, expulsion or extradition, the right to non-discrimination and the right to an effective remedy is acknowledged, but the impacts are not further specified. The ramifications concerning the right to human dignity and the right of the child, during fingerprinting, as well as the respect for private life were

assessed proportional and justified by the interest of national security an public safety (2016/0132 (COD), 2016/COM(2016) 272 final, pp. 9–11). Furthermore, the Commission argues that Eurodac's conception is driven by the privacy by default and by design principle, and therefore adheres to all data protection principles, with only proportional limitations (2016/0132 (COD), 2016/COM(2016) 272 final, p. 8; 2016/0132 (COD), 2020/COM(2020) 614 final). Overall, it concludes that the Proposal fully complies with the charter of fundamental rights and the GDPR (2016/0132 (COD), 2016/COM(2016) 272 final, p. 11).

The estimation of fundamental rights impacts by the FRA and during the expert interviews varied strongly from the commission's judgement. It is however important to note, that many implications cannot yet be foreseen, or only estimated, since the implementation of the Regulation is not yet executed. Additionally, it is important to acknowledge that the regulations within the New Pact are all interconnected, and some consequences might not be caused by Eurodac exclusively.

Principle of non-discrimination (Article 21) A major issue regarding the position of minors in Eurodac is the interconnection of Eurodac with security databases and the access of law enforcement. This does not only contribute to an expanded criminal suspicion against now also children in migration (Interview 2; Interview 3), but also a disproportionately increased visibility and risk of being identified in case of deviance (Interview 2). This is especially problematic, as children cannot be held responsible for their decisions and actions in the same way as an adult (Interview 3). Furthermore, a higher degree of criminalization in case of minor criminal offences, is expected due to their inclusion in security databases (Interview 1). Therefore, this can be understood as conflicting with the principle of non-discrimination.

Right to human dignity (Article 1), physical and mental integrity (Article 3) and the rights of the child (Article 24) During the registration process, the use of coercive means against minors is not explicitly prohibited (Interview 5). The Regulation permits a "proportionate degree" of coercion yet fails to define "proportionate degree" and "coercion" (Interview 5). This ambiguity leaves room for a wide range of coercive actions, ranging from physical force to psychological pressure and abuse (Interview 5). While such practices are not expected to become the norm, the possibility cannot be excluded, especially in camps that are closed to the public (Interview 2). This issue is linked to the lack of public oversight in migration matters (Interview 2). Instances of power abuse, such as the use of electric shocks to ensure compliance during registration, have already been reported before the fingerprinting was made mandatory for the member states (Interview 2).

Children are particularly vulnerable to such measures due to their heightened sensitivity to trauma, necessitating the presence of specially trained personnel (Interview 5). One interviewee noted that proper registration protocols would consider these concerns, but the current system allows significant potential for violations (Interview 3), especially regarding children's rights, the human dignity (Interview 1; Interview 4) and linked to this, the right to integrity.

Potential violations may also arise from the use of age-assessment technologies on minors, which are now required from an even younger age (Interview 2). Although the Eurodac Regulation stipulates that in cases of doubt, a minor's age should be assumed to be lower to favor the child (European Commission, 2024), the practice of age assessment is likely to continue, due to the new requirement of registration for

member states and the fact that the use of such technologies is not explicitly prohibited. This raises ethical concerns (Interview 2), particularly given that instances where the vulnerable position of children was exploited to experiment with age assessment technologies on children (Interview 2). Issues of insufficient public oversight also exacerbate the concerns (Interview 2).

Right to data protection (Article 8) & Right to privacy (Article 7) The right to data protection and the right to privacy are affected in various dimensions (Interview 1). Already through the broad access of law enforcement agencies on the personal data, paired with long retention periods, those rights are impacted.

Even though the Regulation sets out the information of children in a child friendly manner, the understanding of minors between the age of six and fourteen, about the implications of their registration, is questionable (Interview 2), impacting their capacity to give informed consent to the procession of their personal data. Especially considering the complexity of the ramifications, including an increased visibility in case of minor criminal offences, as well as implications on future migration matters, like secondary movements, or visa applications, the understanding of children as young as six cannot be assumed (Interview 2). Further concerns were raised regarding data authority and data control (Interview 2). This also relates to the understanding of minors about their rights and the system infrastructure, but also to the danger of inaccurate and invalid data. Such technical inaccuracies could trigger false-positive hits, which would induce severe consequences for individuals affected, and even more so, when performed on children (Interview 2). Issues arise also regarding the principle of purpose limitation and data minimization, considering the variety of objectives addressed in the Regulation, the disproportionate retention periods, and the amount of data stored. Furthermore, criticism regarding the training of algorithms and the development of statistics, as well as the danger of data leaks, was brought up in this regard (Interview 1; Interview 2; Interview 4).

**Right to asylum (Article 18)** An indirect consequence is the punishment of secondary migration, as foreseen in the New Pact. Even in cases where individuals are denied efficient access to procedures their movement is restricted (Interview 5). It is important to acknowledge that the reception conditions in different EU states vary significantly, and this variation strongly affects the degree of integration or marginalization within society (Brekke & Brochmann, 2015). This situation also contributes to psychological strain, frustration, and a feeling of restriction (Interview 5). These factors could potentially impact the right to asylum, and related rights.

### 6 Discussion

The analysis of the objectives within the EU migration management framework, particularly through the Eurodac system, reveals a multifaceted approach that is primarily geared towards migration control, rather than the originally stated objectives. The initial purpose of Eurodac, namely the effective implementation of the Dublin Convention, has undergone a significant transformation. Eurodac has evolved into a multifunctional database that gives priority to security, safety and control over solidarity and child protection. Moreover, the investigation illustrates that less punitive options, such as reliance on the Schengen Information System (SIS) or enhanced involvement of social services, could represent viable policy alternatives, significantly impacting the proportionality of the policy. This is consistent with the FRA's assessment that the

expansion of Eurodac is disproportionate, unwarranted, and not evidence-based (2016/0132 (COD), 2016/COM(2016) 272 final). Considering this, the limitations imposed on the fundamental rights of minors appear excessive and ironic when viewed in the context of the Commission's declared motive of child protection. In conclusion, the decision to expand biometric data collection for minors in Eurodac appears to have been driven more by security and control considerations than by a genuine focus on child protection. This has resulted in a further securitization of European migration policy, which now encompasses children of the age of six. The intrusive gathering of data for security purposes can be interpreted as an instance of dataveillance, which stops at nothing, not even minors.

The investigation into the practical ramifications of the expanded collection of biometric data on minors has revealed significant concerns regarding the fundamental rights of minors, as enshrined in the EU Charter of Fundamental Freedoms. Despite the Commission's assertion that the Eurodac system adheres to data protection principles and complies with fundamental rights, expert interviews have identified several potential violations and ethical issues. Potential violations of the right to non-discrimination, the right to privacy, the right to data protection, the right to asylum, as well as the right to human dignity, the right to physical and mental integrity, and the rights of the child were identified. This poses serious questions about the Unions values in the policy field, and the universality of fundamental rights, like the right to dignity.

The Commission justifies limitations on the right to human dignity and the rights of the child, particularly during the registration process (2016/0132 (COD), 2016/COM(2016) 272 final), on the grounds of internal security and public safety. This is even though the registration process itself raises concerns about the rights of the child. This argumentation unmasks security considerations as a major factor regarding the missing safeguards of children's rights and their inclusion into security databases. On the one hand, this can be interpreted as an expansion of the crimmigration narrative towards minors of the age of six, justifying their dataveillance through intrusive gathering of data and disproportionate retention periods. On the other hand, a joint statement of civil society and UN organizations, including UNICEF; ONHCR; IOM; ETC, declared that "even when done with a child protection objective in mind, coercion of children in any manner or form in the context of migration related procedures, violates children's rights, which EU Member States committed to respect and uphold" (UNICEF, 2018), and the EUGH decided within a previous ruling, that "Human dignity is inviolable. It must be respected and protected" ( (Judgement of the court in case C-578/16 PPU, 16.02.2017), raising significant concerns about the efficacy and appropriateness of the reform.

Significant gaps were also revealed within the decision-making process. It was characterized by a lack of transparency, limited consultation with civil society, and considerable political maneuvering within the European Institutions. The lowering of the age for biometric data collection was decided in unofficial negotiations without a public or parliamentary vote, raising concerns about the democratic integrity and transparency of the process. The limited investment by civil society in the file and the absence of impact assessments leave the potential consequences of the reform

largely unknown and impact the democratic scrutiny of the Regulation. This highlights the need for more transparent and inclusive legislative processes in EU migration management.

The framing of the regulation as merely technical, and the portrayal of scope expansions as technical necessities, serve to conceal underlying socio-political dimensions. Furthermore, child protection was regarded as a matter of data-availability. This approach reflects the idea of technological fixes, revealing the apparent technosolutionism evident in the pursuit of Eurodac. Also, decisions like the inclusion of facial images are subjected to this, since this expansion was a reaction to migrants destroying their fingerprints due to their apparent mistrust in EU migration management. Rather than focusing on trust-building measures, or more humanitarian policies, the issue was addressed by gathering additional data.

Shortcomings in humane considerations regarding the policy strongly reflect European priorities in terms of migration management. This is supported by findings that human rights violations are already a practice within migration management, like within migration camps. Instead of addressing such issue, further opportunities for power abuse, such as coercion during registration, are created. The control of people on the move and limiting migration through deterrence policies seem to take precedence over respecting the fundamental rights of the affected individuals. This reflects a shift in European values, where policies of deterrence and maximum control overshadow the shared European values of the respect for human rights and democratic principles.

## 7 Conclusion

This thesis examines the implications of the expanded collection if minors' biometric data for the EU migration management, considering the fundamental rights of the child. This is investigated based on the objectives of the Regulation, the factors influencing the decision-making process, including alternative means, and the implications of Eurodac on the fundamental rights of minors.

Within the analysis, it became evident, that the objective Eurodac was once established for, the effective implementation of the Dublin System, deteriorated while enforcing a further securitization of migration policy and expanding the crimmigration narrative towards the inclusion of children. Furthermore, the objective of child protection regarding the extension of Eurodac to include minors of the age of six, was identified as not convincing, considering the grave violations of their rights. An expert working in child protection concluded in this regard:

"It is all a matter of how it [Eurodac] is actually enforced and who has access to this data and for what purposes is this data used. And that is where I am not sure if the current Regulation and the new one are actually designed to properly respond to child protection matters or are rather designed to enforce migration management. And here I am saying, for example, the fact that access to this data is quite large. For example, law enforcement authorities can have access to this data at large and I do not see, there are no limitations, there are no, let's say, filters. And therefore, I do not think the purpose is child protection. The system is not being designed with that purpose in mind [...] the modality for collecting this data is not guaranteed to be child friendly" (Interview 5, p.1).

Furthermore, several shortcomings during decision-making were identified, resulting in democratic scarcity of the Regulation. A strong tendency towards reliance on technological-fixes and the framing of scope expansions as merely technical matters was prevalent. This does not only support the claim of a prevalent techno-solutionism in decision-making, but also unmasks the priority of security, surveillance and deterrence in EU asylum and migration policy. To achieve such objectives, the EU seems willing to overlook its own values regarding the respect for fundamental rights. This finding, however, is not an individual case. The continuing restriction of migration, border fortification efforts, and the securitization through technology and surveillance in this policy field emerged after the incident of 9/11 and greatly intensified since the summer of migration in Europe in 2015. The findings are therefore in a historic continuity and in line with the pre-existing literature.

The limitations of this study include the absence of interviewees that partook in the negotiations within the council, or the commission. Furthermore, all staff of the EP interviewed is associated with centre-left parties, possibly introducing bias. Therefore, the insights in the decision-making process might miss some arguments, or considerations of other negotiating parties. Also, as mentioned previously, a lot of consequences of the Regulation can not yet be foreseen.

To gain a more wholistic picture of the position of children in the CEAS, other Regulations of the New Pact should be investigated. Further research should also be conducted during and after the implementation of the 2024 Eurodac Regulation to identify the concrete consequences for the children. Furthermore, research including people that experienced registration, or work within authorities operating with Eurodac could serve valuable insights "on the ground". Overall, a lot more efforts should be invested into the file.

Due to the minimal involvement of civil society and omissions in impact assessments, the severe implications of the new Eurodac Regulation are under-researched and remain unclear. This thesis therefore fills a substantial gap, as the Eurodac Regulation has received little attention compared to other Regulations included in the New Pact. A staff member of the European Parliament emphasized:

"Everything that can make people aware about this file, I take it. Because, really, what has been done is very dangerous I think" (Interview 1, p. 9).

# References

- Amelung, N. (2021). "Crimmigration Control" across Borders: The Convergence of Migration and Crime Control through Transnational Biometric Databases. Advance online publication. https://doi.org/10.12759/HSR.46.2021.3.151-177 (Historical Social Research, 46(3), 151-177).
- Amoore, L. (2006). Biometric borders: Governing mobilities in the war on terror. *Political Geography*, 25(3), 336–351. https://doi.org/10.1016/j.polgeo.2006.02.001
- Amoore, L., & Goede, M. de (2005). Governance, risk and dataveillance in the war on terror. *Crime, Law and Social Change, 43*(2-3), 149–173. https://doi.org/10.1007/s10611-005-1717-8
- Amoore, L., & Goede, M. de (2021). Datawars: reflections twenty years after 9/11. *Critical Studies on Terrorism*, 14(4), 425–429. https://doi.org/10.1080/17539153.2021.1982117
- Blasi Casagran, C. (2021). Fundamental Rights Implications of Interconnecting Migration and Policing Databases in the EU. *Human Rights Law Review*, *21*(2), 433–457. https://doi.org/10.1093/hrlr/ngaa057
- Bredström, A., Krifors, K., & Mešić, N. (2022). Border Reconfiguration, Migration Governance, and Fundamental Rights: A Scoping Review of EURODAC as a Research Object. *Social Inclusion*, 10(3), 68–81. https://doi.org/10.17645/si.v10i3.5398
- Brekke, J.-P., & Brochmann, G. (2015). Stuck in Transit: Secondary Migration of Asylum Seekers in Europe, National Differences, and the Dublin Regulation. *Journal of Refugee Studies*, 28(2), 145–162. https://doi.org/10.1093/jrs/feu028
- Brom, F. W., & Besters, M. (2010). 'Greedy' Information Technology: The Digitalization of the European Migration Policy. *European Journal of Migration and Law*, *12*(4), 455–470. https://doi.org/10.1163/157181610X535782
- Brouwer, E. (2002). Eurodac: Its Limitations and Temptations. *European Journal of Migration and Law*, 4(2), 231–247. https://doi.org/10.1163/157181602400287378
- Bux, U., & Maciejewski, M. (2023). Fact Sheets on the European Union: An area of freedom, security and justice: General aspects. https://www.europarl.europa.eu/factsheets/en/sheet/150/an-area-of-freedom-security-and-justice-general-aspects
- Committee on Civil Liberties, Justice and Home Affairs. (2021). Explanatory Statement: to the draft updated mandate on the proposal for a Regulation of the European Parliament and of the Council on the establishment of 'Eurodac' for the comparison of fingerprints for the effective application of Regulation (EU) No 604/2013, for identifying an illegally staying third-country national or stateless person and on requests for the comparison with Eurodac data by Member States' law enforcement authorities and Europol for law enforcement purposes (LIBE-DT-661983\_EN). European Parliament. https://www.europarl.europa.eu/doceo/document/LIBE-DT-661983\_EN.pdf
- Dear, M., & Lucero, H. M. (2005). Postborder Cities, Postborder World: The Rise of Bajalta California. *Environment and Planning D: Society and Space*, *23*(3), 317–321. https://doi.org/10.1068/d2303ed

- Dijstelbloem, H. (2020). Europe's New Technological Gatekeeper. Debating the Deployment of Technology in Migration Policy. *Amsterdam Law Forum*, *1*(4), 11. https://doi.org/10.37974/ALF.82
- Dijstelbloem, H. (Ed.). (2021). *Borders as Infrastructure: The Technopolitics of Border Control*. The MIT Press. https://doi.org/10.7551/mitpress/11926.001.0001
- Directorate-General for Migration and Home Affairs. (2024, June 16). *Schengen Information System*. https://home-affairs.ec.europa.eu/policies/schengen-borders-and-visa/schengen-information-system en
- Doek, J. E., & Liefaard, T. (Eds.). (2015). SpringerLink Bücher. Litigating the Rights of the Child: The UN Convention on the Rights of the Child in Domestic and International Jurisprudence (Aufl. 2015). Springer Netherlands. https://doi.org/10.1007/978-94-017-9445-9
- Drengson, A. R. (1984). The sacred and the limits of the technological fix. *Zygon*®, 19(3), 259–275. https://doi.org/10.1111/j.1467-9744.1984.tb00929.x
- Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the establishment of 'Eurodac' for the comparison of fingerprints for the effective application of [Regulation (EU) No 604/2013 establishing the criteria and mechanisms for determining the Member State responsible for examining an application for international protection lodged in one of the Member States by a third-country national or a stateless person] for identifying an illegally staying third-country national or stateless person and on requests for the comparison with Eurodac data by Member States' law enforcement authorities and Europol for law enforcement purposes (recast), EUR-Lex (2016 & rev. COM(2016) 272 final). https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52016PC0272
- Amended proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the establishment of 'Eurodac' for the comparison of biometric data for the effective application of Regulation (EU) XXX/XXX [Regulation on Asylum and Migration Management] and of Regulation (EU) XXX/XXX [Resettlement Regulation], for identifying an illegally staying third-country national or stateless person and on requests for the comparison with Eurodac data by Member States' law enforcement authorities and Europol for law enforcement purposes and amending Regulations (EU) 2018/1240 and (EU) 2019/818, eur-lex (2020 & rev. COM(2020) 614 final). https://eur-lex.europa.eu/resource.html?uri=cellar:267d38e8-ff62-11ea-b31a-01aa75ed71a1.0001.02/DOC\_1&format=PDF
- European Commission. (2024). *Applying the EU Charter of Fundamental Rights*. https://commission.europa.eu/aid-development-cooperation-fundamental-rights/your-rights-eu/eu-charter-fundamental-rights/when-does-charter-apply en
- European Parliament. (n.d.). *Protecting Fundamental Rights within the Union*. Retrieved June 16, 2024, from https://www.europarl.europa.eu/about-parliament/en/democracy-and-human-rights/fundamental-rights-in-the-eu
- REGULATION (EU) 2024/1358 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 14 May 2024 on the establishment of 'Eurodac' for the comparison of biometric data in order to effectively apply Regulations (EU) 2024/1351 and

- (EU) 2024/1350 of the European Parliament and of the Council and Council Directive 2001/55/EC and to identify illegally staying third-country nationals and stateless persons and on requests for the comparison with Eurodac data by Member States' law enforcement authorities and Europol for law enforcement purposes, amending Regulations (EU) 2018/1240 and (EU) 2019/818 of the European Parliament and of the Council and repealing Regulation (EU) No 603/2013 of the European Parliament and of the Council, Eur-LEX (2024 & rev. EN).

  https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L 202401358
- Charter of Fundamental Rights of the European Union, Official Journal of the European Union (2012). https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A12012P%2FTXT
- European Union Agency for Fundamental Rights (2016). Opinion of the European Union Agency for Fundamental Rights on the impact on fundamental rights of the proposal for a revised Eurodac Regulation. https://fra.europa.eu/sites/default/files/fra\_uploads/fra-2016-opinion-06-2016-eurodac-0 en.pdf
- Farley, H. M., & Smith, Z. A. (2020). Sustainability: If it's everything, is it nothing? (Second edition). Critical issues in global politics. Routledge. https://doi.org/10.4324/9781351124928
- Franko, K. (2020). The crimmigrant other: Migration and penal power. Key ideas in criminology. Routledge. https://doi.org/10.4324/9781351001441
- GDPR EU. (2024). What are the 7 main principles of General Data Protection Regulation? https://www.gdpreu.org/7-main-data-protection-principles-under-gdpr/
- Genova, N. P. de (2002). Migrant "Illegality" and Deportability in Everyday Life. *Annual Review of Anthropology*, 31(1), 419–447. https://doi.org/10.1146/annurev.anthro.31.040402.085432
- Gülzau, F., Mau, S., & Korte, K. (2021). Borders as Places of Control. Fixing, Shifting and Reinventing State Borders. An Introduction. Advance online publication. https://doi.org/10.12759/HSR.46.2021.3.7-22 (Historical Social Research, 46(3), 7-22).
- Hassner, R. E., & Wittenberg, J. (2015). Barriers to Entry: Who Builds Fortified Boundaries and Why? *International Security*, *40*(1), 157–190.
- Jain, A. K., Ross, A., & Prabhakar, S. (2004). An Introduction to Biometric Recognition. IEEE Transactions on Circuits and Systems for Video Technology, 14(1), 4–20. https://doi.org/10.1109/TCSVT.2003.818349
- Jeandesboz, J. (2016). Smartening border security in the European Union: An associational inquiry. Security Dialogue, 47(4), 292–309. https://doi.org/10.1177/0967010616650226
- Jones, C. (2020). *Automated suspicion: The EU's new travel surveillance initiatives*. https://www.statewatch.org/automated-suspicion-the-eu-s-new-travel-surveillance-initiatives/
- Judgement of the court in case C-578/16 PPU, C-578/16 PPU, InfoCuria Rechtsprechung (EUGH February 16, 2017).

- https://curia.europa.eu/juris/document/document.jsf?text=&docid=187916&pageIndex=0&doclang=EN&mode=Ist&dir=&occ=first&part=1&cid=3519755
- Korte, K. (2021). Filtering or Blocking Mobility? Inequalities, Marginalization, and Power Relations at Fortified Borders. Advance online publication. https://doi.org/10.12759/HSR.46.2021.3.49-77 (Historical Social Research, 46(3), 49-77).
- Legislative Observatory. (2024). *Procedure File* (2016/0132(COD)). European Parliament. https://oeil.secure.europarl.europa.eu/oeil/popups/printficheevents.pdf?id=667 936&lang=en
- Lyon, D. (Ed.). (2005). Surveillance as Social Sorting: Privacy, Risk and Automated Discrimination (1st ed.). Taylor and Francis. https://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&db=nlabk&AN=139228
- Magnet, S. (2011). When biometrics fail: Gender, race, and the technology of identity. Duke University Press. https://doi.org/10.2307/j.ctv12101s4
- Malmqvist, E., Furberg, E., & Sandman, L. (2018). Ethical aspects of medical age assessment in the asylum process: A Swedish perspective. *International Journal of Legal Medicine*, *132*(3), 815–823. https://doi.org/10.1007/s00414-017-1730-3
- Marcu, B.-I. (2021). *Eurodac: Biometrics, Facial Recognition, and the Fundamental Rights of Minors*. https://europeanlawblog.eu/2021/04/29/eurodac-biometrics-facial-recognition-and-the-fundamental-rights-of-minors/
- Mau, S. (2021). *Sortiermaschienen* (1ST ED.). Verlag C. H. Beck. https://doi.org/10.17104/9783406775772
- Mayring, P. (2015). *Qualitative Inhaltsanalyse: Grundlagen und Techniken* (12. Aufl.). *Beltz Pädagogik*. Beltz. http://nbn-resolving.org/urn:nbn:de:bsz:31-epflicht-1136370
- Metcalfe, P., & Dencik, L. (2019). The politics of big borders: Data (in)justice and the governance of refugees. *First Monday.* Advance online publication. https://doi.org/10.5210/fm.v24i4.9934
- Mets, K. (2021). The fundamental rights of unaccompanied minors in EU asylum law: a dubious trade-off between control and protection. *ERA Forum*, *21*(4), 625–637. https://doi.org/10.1007/s12027-020-00631-9
- Migration and Home Affairs. (2024, March 29). *Common European Asylum System*. https://home-affairs.ec.europa.eu/policies/migration-and-asylum/common-european-asylum-system\_en
- Misoch, S. (2019). *Qualitative Interviews* (2., erweiterte und aktualisierte Auflage). *De Gruyter Studium*. De Gruyter Oldenbourg. https://doi.org/10.1515/9783110545982
- Morozov, E. (2013). To save everything, click here: The folly of technological solutionism (Paperback first published.). PublicAffairs.
- Müller, C. J. (2016). Prometheanism: Technology, digital culture, and human obsolescence. Critical perspectives on theory, culture, and politics. Rowman & Littlefield International.

- Newman, D. (2006). Borders and Bordering. *European Journal of Social Theory*, 9(2), 171–186. https://doi.org/10.1177/1368431006063331
- Orav, A. (2024a). Legislative Train Scedule: Recast Eurodac Regulation. https://www.europarl.europa.eu/legislative-train/theme-promoting-our-european-way-of-life/file-jd-recast-eurodac-regulation
- Orav, A. (2024b). *Recast Eurodac Regulation*. Bierfing EU Legislation in Progress (PE 589.808 June 2024). European Parliamentary Research Service. https://www.europarl.europa.eu/RegData/etudes/BRIE/2016/589808/EPRS\_BRI(2016)589808 EN.pdf
- Queiroz, B. M. (2019). The impact of eurodac in eu migration law: The era of crimmigration? *Market and Competition Law Review*, *3*(1), 157–186.
- S. and Marper v. the United Kingdom, 30562/04 and 30566/06 (European Court of Human Rights).
- Sætra, H. S. (2022). Al for the sustainable development goals (First edition). Al for everything. CRC Press, Taylor & Francis Group. https://doi.org/10.1201/9781003193180
- Sætra, H. S. (Ed.). (2023). *Technology and Sustainable Development*. Routledge. https://doi.org/10.1201/9781003325086
- Sauer, P. J. J., Nicholson, A., & Neubauer, D. (2016). Age determination in asylum seekers: Physicians should not be implicated. *European Journal of Pediatrics*, 175(3), 299–303. https://doi.org/10.1007/s00431-015-2628-z
- Schatzberg, E. (2018). *Technology*. University of Chicago Press. https://doi.org/10.7208/chicago/9780226584027.001.0001
- Shachar, A., & Mahmood, A. (2021). The Body as the Border: A New Era. Advance online publication. https://doi.org/10.12759/HSR.46.2021.3.124-150 (Historical Social Research, 46(3), 124-150).
- UNICEF (Ed.). (2018). Joint statement: Coercion of children to obtain fingerprints and facial images is never acceptable. https://www.unicef.org/eca/press-releases/joint-statement-coercion-children-obtain-fingerprints-and-facial-images-never
- Convention on the Rights of the Child, OHCHR (1989).
- van der Ploeg, I. (1999). The illegal body: 'Eurodac' and the politics of biometric identification. *Ethics and Information Technology*, 1(4), 295–302. https://doi.org/10.1023/A:1010064613240
- Winner, L. (1977). Autonomous technology: Technics-out-of-control as a theme in political thought (9. printing). MIT Pr.

# Appendix I - Coding Scheme

The coding scheme can be accessed on request.

# Appendix II – Interview Transcripts

The Interview Transcripts II, III and V can be accessed on request. Due to consent and ethical restrictions Transcript I and IV cannot be accessed but were approved by the Supervisor of this Thesis.