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Emotional Detection in Automated Border Control: A discourse analysis of the case iBorderCtrl, 2016-2019

by

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Abstract

This thesis seeks to advance the already productive encounter between border studies and biopolitics. It critically assesses the experimentation with an Intelligent Portable Control System (iBorderCtrl), with technologies adopting the future development of the Schengen Border Management, at EU level. Significantly, it suggests that a Foucauldian account of biopolitical security can help analyzing how iBorderCtrl is envisioned to promote the further development of automated borders. In that sense, the question, how iBorderCtrl can be interpreted as a biopolitical tool contributing to the further development of a Fortress Europe, will form the basis of this thesis. In order to conduct a Foucauldian discourse analysis (FDA), official program documents and research results such as integration plans and annual reports submitted to the European Commission were collected. These will be complemented with media coverage on the project for a more sophisticated approach. A biopolitical approach conceptualizes iBorderCtrl as a form of power exercise, which helps to understand the current efforts to render iBorderCtrl as a tool to speed up border crossing, while securing and smartening EU borders.

Keywords: discourse analysis; iBorderCtrl; governmentality; security dispositif; Fortress Europe

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I. List of Abbreviations

iBorderCtrl	Intelligent Portable Control System
EU	European Union
Eurosur	European Border Surveillance System
Frontex	European Border and Coast Guard Agency
ADDS	Automatic Deception Detection System
MMU	Manchester Metropolitan University
ST	Silent Talker
FMT	Face Matching Tool
TUA	Traveler User Application

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1 Introduction

1.1 Background

Through a Foucauldian lens, this thesis will explore the underlying power structures of automated border control at EU external borders. Central in this regard has been the development of new surveillance technologies used by agencies to increase their situated awareness. Significantly, governments are regularly experimenting with new features of automated border control, such as widely contested artificial intelligence lie-detection technology. One of such mechanisms is the Intelligent Portable Control System (hereinafter iBorderCtrl), which was designed to screen migrants at border crossings in Greece, Hungary, and Latvia via analyzing individual's facial features (Feldstein 2019). Presuming that the case of the iBorderCtrl discourse reveals coercive patterns that are typical for the EU's security policy, this thesis focuses on iBorderCtrl for three reasons. Firstly, facial recognition technologies play a central role in Europe's border and migration management. Secondly, iBorderCtrl has been criticized for ethical reasons, especially concerning the degrading treatment of migrants, and thirdly, due to the harsh critique, the project has been terminated by the end of its test phase in 2019. Thus, the case of the iBorderCtrl discourse can serve as a medium to examine how sovereign power is exercised within the EU's security apparatus (Marino 2021).

Sophisticated border controls at the EU's outer edges have been famously depicted by the metaphor Fortress Europe (Vaughan-Williams 2016). It relates to the combination of different deterrence, intelligence, surveillance, and anti-smuggling efforts and strategies installed to support Europe's humanitarian securitization infrastructure (Marino 2021). A rising share of academic studies concentrates on the belief, that actions of internal de-bordering within the Schengen area must come with external re-bordering, especially after the events of 2015 (Kriesi et al. 2021; Lutz & Karstens 2021; Schimmelpfennig 2021; Vaughan-Williams 2016). Structuralist research captures this dynamic by illustrating the securitization of the EU's migration policy, pointing at security discourses that underline efforts to preserve internal freedom within the Schengen area (Albahari 2018; Balzacq & Guzzini 2015; Cecorulli 2018; Genschel & Jachtenfuchs 2021). Other scholarly works emphasize how collective action problems make external re-bordering particularly ineffective and fail to tackle real impacts on human lives (Cymbranowicz 2018; Eilstrup-Sangiovanni 2021; Molnar 2019) or evaluate how the digitalization of borders drive divides among the global population (Beduschi 2020; Chouliaraki & Georgiou 2019; Lohne & Sandvik 2014; Marcinkowski & Starke 2019; Sandvik et al. 2014). Significantly, the engagement with contemporary surveillance technology in biopolitical terms has gained immense popularity, since it understands the EU's external

borders as institutions of power, whose functioning is highly dependent on the evolution of technological innovations (Chouliaraki & Georgiou 2019; Davitti 2019; Marino 2021; Vaughan-Williams 2010; Walters 2015). Foucault's ideas enrichened the study of borders for a long time. Even though he did not examine explicitly the specificities of mass surveillance of travelers, except for his examination of security apparatuses (Tierny 2008), his work certainly included themes of mobility and refugee issues (ibid; Walters 2015).

1.2 Research Problem

The focus of contemporary security studies has mostly been on general deterrence strategies used to address increased migration flows. Even though there has been a variety of critical voices from non-governmental organizations (Begault 2019; EDRi 2020; iBorderCtrl? No! n.d.), and journalists (Naranjo and Molnar 2020; Wiese 2019), a critical examination of the iBorderCtrl discourse regarding biopolitical power structures is an area that has not been academically explored yet. Analyzing its biopolitical nature could, however, contribute to a better understanding of how security discourses in the EU function to preserve a volatile status quo (Albahari 2018). In this thesis, the aim is to focus on this gap in using Foucault's ideas of security as a tool to analyze how and to what extent rhetorical elements of the iBorderCtrl discourse justify and legitimize automated border control.

To find out more about the nature of security governance, it is crucial to understand the language used in social and cultural context structures. This moves the focus away from macro to micro levels of interaction manifested in verbal aspects, text, and visualization. A critical approach to social power dynamics and inequality asks for "the 'why', the purposive nature of actions" (Keller 2015, p.15). Discourse can thus be interpreted as a social practice, reciprocally influenced by, and shaping their rule systems (ibid). An investigation of this dialectical relationship is pivotal to grasp security concepts in constructivist terms and rethink what has been presumed immutable whereas it can be reformulated to put the life of migrants and refugees at the center of attention. In this context, European territory should not be taken for granted but rather understood as something constructed by securitization efforts (Vaughan-Williams 2016). Based on these considerations, this thesis aims to answer the following research question:

How can the case of the iBorderCtrl discourse be interpreted as a biopolitical tool contributing to the further development of a Fortress Europe?

Investigating this question is expected to reveal mismatching linguistic patterns which, on the one hand, concentrate on stricter migration management and, on the other hand, attempt to portray the project as accountable, gain public acceptance and generate trade benefits.

1.3 Research Approach

Several sub-questions will lead the analysis. To grasp what role the iBorderCtrl discourse attributes to border-crossing individuals, the first sub-question, (1) *according to what rules phenomena of the security discourse are objectivized*, will help understand patterns of differentiation between populations, significantly those of European origin and so-called third-country nationals. This question is important because it helps identify the logic according to what rules non-EU citizens are presented as a security threat to upholding the support of the majority for measures taken to hinder subjects outside the discourse from coming to Europe. Eventually, it will reveal that this discourse is racist and anti-migrant. Furthermore, it is necessary to analyze from what institutional location the data subject is formed, which necessitates the question, (2) *from what subject-position the discourse is formulated*. It will be outlined, that the privatization of border control plays into the hands of private security corporates concerned with artificial intelligence and big data, disadvantaging migrants, and refugees. This question is crucial to place the discourse in the context of governmentality practices (Tierny 2008). To understand the incentives entrepreneurs and policymakers share regarding the investment in the iBorderCtrl project, an answer to the question, (3) *how the aspired theories are supposed to constitute better solutions to the framed security problem than others,* will be sought. Essentially, it will show how the techniques of anomaly detection resemble the objective to identify and eliminate dissimilarities. This question is crucial to understand how a positive form of power is integrated in the discouse of iBorderCtrl. Last, but not least, to answer, (4) *how this discourse is reflected in dispositifs (Wichum 2013)* is an interpretation of the iBorderCtrl discourse as a biopolitical tool. This is important because it will enable a detailed response to the main research question of the thesis which simultaneously reflects the urgency of the topic in a way that can encourage further investigation in this field.

The thesis is structured as follows: Foucault's main theorizations regarding biopolitics and security will be investigated in the first chapter. In the third chapter, methods regarding the case selection, the data collection method, and the data analysis will be illustrated. A Foucauldian discourse analysis will be conducted and presented in chapter four, rounded up by finding answers to the sub-questions. A conclusion will link all chapters by summarizing the main arguments of this thesis and answering the main research question, enabling the formulation of a few striking recommendations for future research and their practical implications.

2 Theoretical Framework: Bodies, Borders, Biopower

To unravel the complex nature of long-established power relations from a Foucauldian perspective is the aim of the following chapter. A Foucauldian account of biopolitics shall help understand how power formations are maintained and solidified via political discourses. Therefore, academic literature on Foucault's observation of changing power dynamics in the world and his account of security, and literature on EU external bordering in the context of migration management are combined. It is organized in a four-step categorization. First, the aim is to uncover the new form of disciplinary power arising in the seventeenth and eighteenth centuries. The specific features of disciplinary power are coerced on the population, which is illustrated in the second section. How this administration of discipline manifests itself in the security apparatus is examined in section three, and finally, security technologies are interpreted as security dispositifs.

2.1 Biopower and the Right to Make Life and Let Die

How do we encounter Foucault's understanding of human behavior and power exercise, if we want to understand the underlying logic behind the degrading treatment of migrants and refugees with security technology? Foucault's conception of biopolitics is only one of many major issues guiding his work but it has been reviewed by lots of researchers and philosophers who all unfolded their perception of the world of biopolitics unraveling the complex nature of the topic itself (Nilsson, 2013). According to Foucault, the seventeenth and eighteenth centuries' technological innovations paved the way for a new form of power exerting a positive influence on life, optimizing skills, subjecting it to discipline replacing a monodirectional form of power by (juridical) rule (Davitti 2018; Tierny 2008). This in turn means that the right to life and death becomes dependent on the will of the sovereign. The original notion of that power was to find its essence in the "power of the sword", meaning that the sovereign's power over granting life only becomes visible when it kills, that is the right to "take life and let live" (Foucault 2003, p.240). The original nucleus of power is thus the inclusion of bare life into the political realm. Now, the transformation is built on mechanisms of power over the body[1], including various devices functioning as rationalization and economization of data subjects (ibid). The modern state therefore constantly reproduces, politicizes, and regulates bare life in the sovereign sphere exposing these lives to violence and death (Davitti 2019).

These techniques by which control is taken over life require disciplinary surveillance[2] strategies, that dichotomously rule over the multiplicity and individuality of bodies (the

[1] The term 'body' is used here to describe each individual body or entity that can be subject to separation, or alignment with all techniques of control (Foucault 2003).

[2] The European IT architecture, connecting main databases such as the Schengen Information System (SIS), the EURODAC to store information on asylum applications, and the Visa Information System (VIS), has been criticized

population) by measuring phenomena in statistical ways (Foucault 2003). In addition, this governmentality is distinguished from sovereign power, which works through binary prohibitions, not through normalization or risk assessment (Valverde 2007). Epidemics for example lead to the establishment of permanent medical institutions collecting enormous amounts of data about a registered population seeking healthcare, which is just another attempt to make use of the simple right to life. In this case, this right becomes instrumentalized by the sovereign offering insurance and safety measures and requiring knowledge over the individual's health status in turn (ibid). In the security context, the profiling[3] apparatus ensures that the unwanted foreigner is excluded from entering the territory of the EU while providing little guidance on who can be admitted. Border authorities like Eurosur[4] or Frontex[5] officials continue to claim that their missions contribute to saving migrants' lives, regardless of human rights advocates' standpoint (Glušac 2014). Foucault terms this 'biopower', mounting in a new right, the capability of "making live and letting die" (Foucault 2003, p.247). Where biopolitics derives its knowledge from biological disabilities or mortality rates is where power and knowledge become intervened. Essentially, it is not simply a phenomenon of disciplinary strategies but goes far beyond that, interfering at the individual's level of generality where everything is stimulated, where life expectancy needs to be increased and so forth (ibid).

2.2 Crowd Control and Discipline

Security mechanisms come into play where the regularization of the life of a whole population is at stake (Foucault 2003). A population is not understood as the unity of all subjects that live in a state but rather as an entity with specific features of governmental intervention. Policymakers have increasingly taken efforts to legitimize governing the movement of people into the EU by technologized border controls at the EU's internal and external borders (Vaughan-Williams 2016). Now, reformulating security threats such as terrorism in governing terms, illustrating it as a problem of controlling crowds, frames the population as an entity that is continuously threatened and threatening to other entities at the same time (Wichum 2013). The crowd itself can be found anywhere and needs to be understood in security dispositif terms, because the logic of constant calculation of the population pervades all spaces of society (Wichum 2013), and purposefully draws invisible lines between crowds. According to Bauman and Lyon, this thought is consistent with Bentham's vision of the panopticon, "putting world affairs under human management and replacing providence with Reason, that mortal enemy of accidents, ambiguity, ambivalence and inconsistency" (2013, p.117), an

by multiple non-governmental organizations for endangering immigrant's human rights and rather providing a policing body against 'illegal' migration (Glušac 2014).

[3] Profiling is any form of automated processing of personal data such as micro gestures for deception detection (Krügel et al. 2018).

[4] Eurosur is the European border surveillance system (Glušac 2014).

[5] Frontex is the European border and coast guard agency (Glušac 2014).

underdeveloped version of the Enlightenment spirit. The panopticon is – according to both Bentham and Foucault - a sort of instrument to maximize safety and freedom for all those that belong to the majority through data retention (Nosthoff 2014) and ensures the automatic functioning of power (Foucault 1979).

In contrast to the safety of the population, Foucault understands the safety of territory as the safety of a sovereign who rules over the territory. The constitution of a closed space that eliminates uncontrolled movement and diffusion of circulating individuals forms the notion of territory as such, which is closely connected to the functioning of a disciplinary architecture. Security functions to maximize 'good' circulation whereas what seems to disturb the status quo is framed as risky and inconvenient (ibid). Retracing Foucault's assumptions regarding profiling during epidemics there is also a strong notion of local spatial partitioning in which the slightest movements are supervised. In his book Discipline and Punish, Foucault traces quarantine measurements during the plague, where the prohibition to leave the town comes with the risk of life, with contagion and, significantly, punishment commanded by 'good officers' surveilling the town gates (1995, p.195). This logic reoccurs during the Covid-19 pandemic, strengthened through public discourses. The establishment of absences and presences, to control where individuals are located, the mediation of hierarchies is the political objective of the administration of discipline (Foucault 1979; Wichum 2013).

2.3 The Security Apparatus

Today's apparatuses of security are disciplinary mechanisms, functioning centripetal by isolating segments and centrifugal at the same time, by integrating new things (Nilsson 2013). In the apparatuses of security, the general notion is not merely all-encompassing surveillance but rather a type of 'laid back observation' to generate an overview of what is often called a cost-benefit-analysis, to learn whether intervention is necessary on one's terms, or even economically 'worth it' (Davitti 2019; Nilsson 2013, Tierny 2008). That is where we can observe a connection between the dynamics of biopolitics taking the course through governmentality inherent of neoliberalist thought, where life becomes politicized (Tierny 2008). Foucault used the term governmentality (which is called 'security' in the first three lectures at the Collège de France (Valverde 2007)) to describe this new form of political rationality, pinpointing to the inherent danger of the before described indiscriminate intervention on life (Davitti 2018; Tierny 2008). This understanding expands the original notion of government as the application of economy, exercising supervision over the dynamics of households and goods from the sixteenth till the eighteenth century through the move towards governmentality replacing the household by the mercantilist conception of economy designing a new reality (Tierny 2008).

Within the logic of liberal governmentality, a population's security, as Bentham points out, forms the constitutive counterpart to its freedom, which is constantly produced through the

conditions of liberalism under which one can be free (Valverde 2007). Thus, there is a permanent possibility of restricting the freedom of a population, which, on the one hand, should be understood as a precondition for security apparatuses to become operative, and on the other hand, as a consequence. This in turn means, that modern apparatuses of security can only function when there is the possibility of free movement and circulation between people and commodities (Nilsson 2013; Wichum 2013).

Following the idea of the freedom of circulation, security technologies that are deployed at borders are aimed at governing circulation processes between populations through digitalization, creating control regimes of security that are constantly shaping the tension between freedom and security maximizing 'good' circulation and decreasing the 'bad' (ibid). This can be illustrated through the example of the Biometrics Module of iBorderCtrl, which is deployed to validate the biometric identity of the traveler, comparing fingerprints and palm vein images to the information stored in databases (iBorderCtrl n.d.a). Security technologies cannot be conceptualized as neutral devices but should rather be understood as subjectivizing processes of power exercise (Wichum 2013). This means that biometric systems inherent in projects such as iBorderCtrl are biopolitical technologies (technologies of power), governing circulation within and excluding circulation between potentially threatening populations (ibid). The focus of research should thus lay on the specific disciplinary logic behind these features.

2.4 Security Dispositifs

If the aim is to understand the disciplinary logic of the iBorderCtrl discourse, one must understand how security technologies can be interpreted as security dispositifs. To do so, it is necessary to distinguish this study of security from other concepts. Security here is not understood as something that originates from speech acts or as a side effect of highly technologized political entities, but rather, it forms a strategical tool to determine power relations, knowledge, and subjectivity, which is why the discourses and the materiality of security need to be considered (Wichum 2013). From such a viewpoint, one might be able to explore why societies feel the need to collectively securing their territory against others.

Contemporary governance is performed through digitalization, or in other words, increasingly, facial recognition techniques form part of digital repression tools that are used to surveil and intimidate and to deter specific challenges to the state (Wichum 2013). They focus on individual identification and help match live footage with images from databases and sometimes aggregate demographic trends. An operational trial based on facial recognition technologies, that has been deployed by the UK Border Agency in 2011, evaluates stress, anxiety, and deception of travelers at border crossings (Sanchez-Monedero and Dancik 2020). Individuals on the move are materialized as a general risk calculated in data analyses. Another such system has been tested on the southern US border in 2012, labeled AVATAR, the same

technology that has been experimented with in early versions of the European lie detector iBorderCtrl. This extension of surveillance technologies to emotional detection reflects the increasing emphasis on not only the politization but also the computerization of life (ibid). Since Foucault developed his theorizations assuming biological life to stand in the center of social practices, they are of immense importance for the analysis of motifs uttered in such instances. Following Foucault (1978), dispositifs thus are not a heterogenous ensemble that comprises discourses and institutions, rather they are the whole strategic network that originates in between all these elements. They are formations developed in a certain historical era to react to urgencies, steering "relations of forces" in a particular direction, utilizing them, blocking them. That requires manipulation of balances of power going far beyond discourses (Davitti 2019, p.1187).

2.5 Preliminary Summary

In this chapter, four of Foucault's main theorizations were traced back and linked to the issue of iBorderCtrl, facilitating a discursive understanding of its nature. New forms of power have led to the development of an administration of discipline resting on the deployment of various security technologies that follow the logic of preemption, always calculating the smallest potential risks will guide the analysis (Wichum 2013). Security dispositifs thus presume the uncertainty of threats by deploying radical methods that become legal practice, governing "the radically unknown" (Wichum 2013, p.168). Furthermore, through these processes, "the future unjustly gains primacy over both the present and the past" (Wichum 2013, p.168), triggering behavior that is built on mere stimulus and response without self-conscious reflection. This capacity to make life and let die serves those who are powerful and bears major implications for the life of already marginalized groups such as migrants and refugees (Davitti 2018). These considerations set foundation for an understanding of the relationship between digital borders and power exercise.

3 Methods

This chapter aims to provide information about the methods that have been chosen to answer the research question. It is organized tripartite, beginning with relevant criteria that lead to the case selection. Subsequently, the method of data collection is described, followed by considerations on the procedure of analysis. The last section includes a unique coding scheme developed to generate structured information about linguistic patterns for the analysis.

3.1 Case Selection

To analyze the EU's automated border control mechanisms as biopolitical constructs, it is crucial to understand the discourse of iBorderCtrl in official policy documents and media discourse. As Sánchez-Monedero and Dencik (2020) point out, 'emotional AI' has increasingly been used by industry understood as something that can be observed in techno-scientific terms, proposing that emotions can be generated in quantified measurements. The measurement of such data has lately been extended from the collection of metadata on activities to the generation of biometrical data based on psychological insights about body movements, facial expressions, and physiology (ibid). States and governments speed up governance increasingly through the usage of detection technologies in partnership with private actors, hence it is perhaps no surprise that these tools have gained enormous popularity in migration control and management (ibid).

Proposed by researchers from a startup company called 'Silent Talker' at MMU, the European AVATAR project has been funded with a €4.5 million grant by the European Research Council's Horizon 2020 program. It was tested at several Greek, Hungarian and Latvian land border checkpoints between the years 2016 and 2019 (Chouliaraki & Georgiou 2019). iBorderCtrl entails typical characteristics of the socio-technical conflation in smart border computing such as existing biometric passport data and fingerprint and face-recognition. However, it is innovative in terms of its lie detection mechanism. The component is called Automatic Deception Detection System (hereinafter ADDS) and claims to identify people based on biomarkers of deceit (Wilde 2018). Third-country nationals are obliged to answer all types of questions regarding their journey posed by a virtual border guard, on basis of which the intelligent mechanism assesses whether a person must go into a secondary screening with a human agent (Begault 2019). In other words, it is centered around "the ability to perform automatic 'deception detection' and 'risk assessment' in the border-crossing encounter" (Sánchez-Monedero & Dencik, 2020, p.5).

After iBorderCtrl was launched in 2018, political actors decried the program as an outrageous, Orwellian expansion of the surveillance state. Even Rothwell herself had reservations regarding the risk of 'getting it wrong' after leaving the university, pointing towards

the approximate hit ratio of less than eighty percent (Bittle 2020). Significantly, details of the process are highly confidential, the relationships between the research team and stakeholders are questionable, ethical questions have not been addressed (Sánchez-Monedero & Dencik, 2020; Bittle 2020), and if so, their results have been submitted to the European Commission in a likewise confidential way. Significantly, the possibility that mechanisms like iBorderCtrl will be deployed at border checkpoints in the future is high, which is why a critical examination of the discourses shaping the perception of such technologies is of immense importance. Subject to considerable counter-research, it can thus serve as a relevant case study because it emphasizes the booming economy of 'emotional AI' intermingled with policies aimed at the further securitization of EU migration policy (Sánchez-Monedero and Dencik 2020).

3.2 Data Collection Method

The focus of this study lies on the discourse of the project iBorderCtrl, formed by entrepreneurs and policymakers, particularly the European Commission, promising results that achieve effectiveness and speed in border crossings. To find out, how iBorderCtrl is portrayed in discourses to contribute to the further development of a Fortress Europe, the discourses of official program documents are analyzed, consisting of deliverables submitted to the European Commission, journal publications, and appearance and presentations in exhibitions and events. These are complemented by newspaper articles expressing concerns about the mechanism. The data ranges from before the dissemination phase in 2006 until today, the year 2021. Migration control and management in the EU are marked by a long history of security technology recently supplemented with innovations in machine learning and AI (Sánchez-Monedero and Dencik 2020). This data-driven governance is marked by the growth of approval of various techno-scientific solutions regarding multiple security purposes (ibid). Given this specific background, official project documents can be expected to focus on the innovative character of such technologies, whereas, because of potential implications on human rights, media coverage is expected to be more controversial.

Official program deliverables revealing the aim and strategies of the project compose the basis for the data selection. They will help, generating a broader picture of what objectives are inherent in the discourse of iBorderCtrl, which techniques are seen appropriate for achieving the set goals, and how they are reflected in dispositifs. Additionally, journal publications are gathered, in which activities of iBorderCtrl in the dissemination phase, as well as their practical success and political relevance, are reviewed. Publications can, on the one hand, help support the findings and on the other hand, reveal deviations from the original purpose and unintended or unforeseen consequences, or conflicts of interest between stakeholders. Last, but not least, appearance and presentations in exhibitions and events will constitute a basis for visual data like posters, flyer, and presentations that are used to support

my arguments. The documents have been derived from the official program website (iBorderCtrl.eu) and the EU research results page (CORDIS) of the European Commission. Some documents are also attained from AsktheEU.org, and a few most popular media articles were chosen from Google Search. Together, twenty-five documents with an approximate number of 770 pages constitute a collection of exclusively qualitative data. To support the analysis with sufficient evidence, several scientific articles will be analyzed as well. In Appendix I, a list of documents that have been collected will be included.

3.3 Data Analysis

An understanding of power dynamics can be facilitated through a comprehensive account of the political language, which is why a discourse analysis can reasonably contribute to this aim. Discourse analyses originate within the poststructuralist theory, influenced by the work of Michel Foucault. Within them, language is not only deemed to be constitutive of social life but also influences subject positions within social order (Keller 2015). They seek to understand a quantity of linguistic action that occurs in institutional settings and is performed by a certain social or political purpose (ibid). The pivot of Foucauldian discourse analysis (FDA) is the reconstruction of social production and order of reality (ibid). The FDA is a form of qualitative analysis, which is chosen to enrich this work in terms of its benefit to uncover power reproduction mechanisms through coercive governance based on techno-science. Even though there is no fixed set of rules and procedures that can be applied, and his formulations are difficult to understand, Foucault's ideas serve as a method to understand contemporary practices through which entire populations are left outside the EU's value frame.

To make an FDA work, it is crucial to develop a coding scheme, which translates important phenomena of the theory into observable characteristics that can be narrowed down into keywords. The chosen policy documents will be analyzed on basis of these keywords, and the findings can be interpreted as to whether they respond to the theory and to what extent they can answer the research questions. The coding approach will largely be a deductive search for linguistic devices with special attention to the sequence of words, assumptions regarding the audience, expressions of values attributed to uttered objectives and subjects, and logical relations the data invokes. The choice of value codes is particularly appropriate for discourse analyses exploring the importance individuals attribute to an idea that simultaneously manifests itself in action (Saldana 2013) and enhances the trustworthiness of the findings. The codes will be grouped in primary codes that are used as organizing codes, and related subcodes that are applied to segments of the data. For example, the code "biometric identity" is split into several keywords indicating the presence of the phenomenon such as "fingerprint", "facial recognition", "vein scanners" and so forth. To make sure that all linguistic variations of keywords are included, both the British and US-American spelling are

considered, and some keywords will stand with an asterisk (*). The scheme traces down three main theorizations of Foucault's work that were conceptualized in the theory part, and that can help analyze the four sub-questions posed at the beginning: data subjects, governmentality, and security dispositifs. The qualitative data analysis platform Atlas.ti serves as a tool to make sufficient use of the concepts in the analysis. Appendix II illustrates, how the primary codes are organized into subcodes.

Eventually, there are certain risks to neutrality and impartiality when conducting a discourse analysis. Outcomes of the analysis could be biased because validity and reliability of the findings are hard to measure, especially regarding language interpretations. To ensure credibility, Appendix III will explain the developed coding scheme in more detail. However, the chosen method could further lead to the drawing of a rather negative picture of surveillance in general. To encounter this problem, the aim is to show that technologies of security can be abused if in the wrong hands, but bear potential to serve human rights if endowed with clear humanitarian aims. According to several human rights organizations, surveillance technologies can, for example, serve rescue missions (Karlsrund, Rosen 2013, Glušac 2014).

Table 1: Coding Scheme

THEORETICAL CONCEPT	CHARACTERISTIC	CODES
Data subjects	Entity with specific features of governmental intervention (Foucault 2003)	Population control, Calculation, Biometric identity, Emotional detection
Governmentality	New form of rational practices through which subjects are governed (Tierny 2008)	Market orientation, Promotional activities, Innovation, Performance
Security dispositifs	Network of strategic formations developed in a certain historical era to react to urgencies (Exercise power within the social body), (Foucault 2003)	Technologies of Security, Knowledge production, Techno-solutionism, Restrictive action

3.4 Preliminary Summary

In the methodology chapter, it was elaborated that the case of iBorderCtrl, with its typical characteristics of smart border computing that have been subject to considerable counter-research, provides a solid ground for discourse analysis. Especially the ADDS module of the program provokes detractors to raise concerns about an expansive Orwellian-type situation. To critically assess, to what extent this could be the case, official program documents that are

publicly available on the iBorderCtrl and research results webpage of the European Commission have been collected, complemented by discerning media coverage. For the analysis, Foucauldian discourse analysis is chosen to appropriately investigate power reproduction mechanisms inherent in automated border control at the EU's external borders. Because Foucault's objective was to reveal the dynamics of contemporary power systems, his approach will help define how power relations are institutionally integrated into security discourses. The developed coding scheme traces three theorizations elaborated on in the theory chapter: Data subjects, Governmentality, and Security Dispositifs to assess whether iBorderCtrl can be interpreted as a biopolitical tool.

4 Analysis: The Biopolitical Nature of iBorderCtrl

The chapter aims to understand the extent to which the iBoderCtrl discourse can be interpreted as a biopolitical tool. The findings of the analysis signalize the suitability of the theory to the data. The research showed that the discourse appeared to normalize surveillance techniques referring to concerns over internal security and minimize the attention given to the screening of third-country nationals at external borders. The neutralizing language appeared to legitimize the contemporary security apparatus (dispositif) of the EU: Official policy documents and publications focused largely on checks of every individual crossing the border checkpoints (travelers and passengers) and paid relatively low attention to the aim of profiling migrants, although the project's focus is migration management (Lomas 2021). By contrast, news coverage on the project created more space for criticism by opening up for discussions related to ethical considerations. Four sections lead the analysis: First, the question how subjects are framed and integrated into the public discourse will be answered. In the second section, the techniques through which automated border control is made publicly accepted will be analyzed. Subsequently, the security discourse is set in a wider context of governmental thought to analyze how the emphasis on trade benefits assists securitization efforts. In the fourth section, it will be shown how ethical considerations are minimized in the iBorderCtrl discourse. A summary answering the sub-questions will be given in the last section.

4.1 The Formation of 'Otherness'

The results of the analysis contain linguistic patterns that were suggested in the theoretical literature. Thus, the following section will outline rhetorical elements used by stakeholders of the iBorderCtrl project to justify the objectivization of phenomena of the security discourse. It will be shown that certain words and phrases are used to systematically draw lines between the 'self' and 'others' and that this 'otherness' appears as a threat that needs strong surveillance and calculation of risk. The manifold structures of security and insecurity are discursively formed by the production of complex racialized concepts of enmity and abnormality based on arbitrary differentiation (Aradau & Blanke 2018). Phenomena of the contemporary security discourses are displayed in multiple ways, depending on the objective for which security technologies are implemented. Nevertheless, the case of the iBorderCtrl discourse reveals an exclusive pattern inherent in liberal governmentality practices. Migration is presented as an issue that primarily causes problems. Almost exclusively, it is referred to in connection to words such as "*dramatic*" or "*massive*" (European Commission 2018a, p.17; Carlos-Roca et al. 2018, p.6). The relation between crowds is influenced through labels instilling fear of potential (cultural) differences such as "low-risk traveler" (Carlos-Roca et al. 2018, p.3), or "*threat of illegal immigration*" (European Commission 2017, p.16). This system

of thought enables the strong demand to institutionalize security and create security regimes that determine who should be placed under specific surveillance (Bauman & Lyon 2013). This manifests itself in attempts to ban certain people from the EU legal system – often translating in systematic negligence of their rights - by highlighting the "*dramatic increase*" in "*illegal border crossing*" and the placeless threat of "*terrorism*" (cf. European Commission 2018c). This is observable in a statement made in one of the project deliverables to the European Commission:

> *"Currently, the most trending way of illegal border crossing is to cross the "green border" which requires advanced surveillance tools and methods in an extended borderline".* (European Commission 2018a, p.1)

The emphasis on the criminality of migrants places them under categorial suspicion and is expected to legitimize specific deterrence strategies, such as the ADDS component of the iBorderCtrl project[6]:

> *"Spoofing, which is an intentional act of deceiving the system has been a major concern of industry representatives, legislative bodies as well as regular security/border officers. Regular attempts to spoof biometric verification systems at EU/Schengen borders have ignited initiatives and research on counter-spoofing techniques."* (European Commission 2018a, p.17)

The antagonistic practice of creating friend vs. enemy relations relies on constructions of a stable identity requiring endless policing and protection of boundaries (Aradau & Blanke 2018, 4). Historically seen, the concepts of normal and abnormal are normative ideas of social norms and practices capturing regularities found in a population. In securitization theory, they can be seen as racialized identity constructions based on cultural representations that are non-revolutionary (Aradau & Blanke 2018). Identity here is built upon the image of the normal European citizen whose well-being is protected. The project claims to pursue raising activities that enhance welfare for all those granted legal status in a member state that allows for enjoying rights, for example, it aims to:

> *"[f]oster discussion and put forward ideas and needs, finding common approaches and strategies to efficiently protect the freedom and security of EU citizens."* (European Commission 2017, p.24)

With such statements, the majority is discursively normalized to a belief in freedom of circulation within a dispositif and the 'normal' citizen is integrated within the capital flows ("*Close borders directly impact the economy and wellbeing of any country*" in Carlos-Roca et

[6] Psychological Profiling is most often used in the sphere of criminal investigations (Crocket et al. 2018).

al. 2018, 1), whereas other groups are excluded from this mobility ("*Open borders will create security deficit*" in Carlos-Roca et al. 2018, 1), producing categories of 'unwelcome' to be monitored, corrected or expelled based on anticipated future behavior (Aradau & Blanke 2018; Bauman & Lyon 2013). This becomes obvious on the project's website:

Figure 1 Screenshot of the iBorderCtrl website (Source: European Commission 2017, p.26)

The confrontation of labels such as "*migrant*" (European Commission 2018g, p.1) and "*third-country nationals*" (European Commission 2020c, p.6), intending to cross borders, with terms like "*bona fide travelers*" (Carlos-Roca et al. 2018, p.6), "*regular travellers*" (European Commission 2020c, p.6) or "*EU citizens*" (Bilby 2017), facilitates a systematic distinction of crowds between EU nationals and non-EU nationals. "Its dispositif shows who is welcome or not, creating categories of people excluded not just from a given nation-state but from a rather amorphous and not unified cluster of global powers." (Bauman & Lyon 2013, p.56). This implies that the discourse reflects racist ideologies.

Techniques of anomaly detection concentrate on learning similarities first and then distinguish between dissimilarities or discrepancies. They reconfigure the normal as similar and the anomaly as dissimilar (Aradau & Blanke 2018). These classifications are ubiquitous in today's risk governmentality. In security practices, anomaly is translated into 'otherness'. As a consequence, insecurity is constituted by 'otherness' and security can be guaranteed only when there is a chance to distance the 'self' from 'others'. Official deliverables of the project address "*better facilitation of thorough checking required for third-country nationals that intend to cross EU borders*" (European Commission 2020c, p.6). Thus, it is not the 'enemy' but the category of the potentially 'risky traveler' that needs to be checked upon. Aradau and Blanke further point out:

> "*The UK government, for instance, has argued that access to bulk data allows the intelligence agencies to search for 'traces of activity by individuals who may not yet be*

known to the agencies…or to identify potential threats and patterns of activity that might indicate national security concern" (2018, p.2)

This citation shows the transformation of discourse that recasts the dichotomous friend versus enemy logic critical security studies offer, to a similarity versus dissimilarity logic that is mirrored in the antagonistic practice of the iBorderCtrl project. "[T]he war-like logic of securitization is that it constitutes political unity through placing it in an existentially hostile environment and asserting an obligation to free it from threat'." (Aradau & Blanke 2018, p.4).

The case of the iBorderCtrl discourse shows that what matters for political actors in the security domain, significantly, stakeholders of the iBorderCtrl project, is the resort to security technologies for the purpose to filter and manage the 'risky traveler'. For example, taken together, 28,72 % of all citations collected in the data concern the creation of data subjects ("*biometric identity"*) and their regularization ("*calculation"*), which is not surprising. In fact, this indicates an epistemic promise to identify new threats and ultimately minimize 'bad' circulation with the help of databases that capture information about the unknown (Wichum 2013).

For security actors, this promise appears to offer an opportunity to detect anomalies or unusual activity that does not fit in the predominant notion of 'normal'. Artificial intelligence and machine learning have shifted the focus of attention towards measuring anomalies as the desirable results of analysis, not as errors that distort the results (Aradau & Blanke 2018). The automated lie detection component of the iBorderCtrl project classifies behavior as "*truthful*" or "*deceptive*" (O'Shea et al. 2018a, p.5), according to compiled vectors consisting of complex combinations of interaction that are detected via pattern detectors (webcams). Discourses of security (risk and threat levels, would-be illegal individuals, irregular migration) that focus on the trans-border movement of 'othered' phenomena define who is welcome or not, creating categories of people excluded from a cluster of global powers, singling them out from special treatment. This discriminatory pattern pervades the whole sort of panoptic iBorderCtrl project:

Krügel et al. claim that profiling serves *"detection or prosecution of criminal offences […] including the safeguarding against and the prevention of threats to public security."* (2018, p.3)

This anti-foreigner discourse profiles minorities as 'unwelcome', allowing surveillance to guard the majority against "shadowy and shapeless risks" (Bauman & Lyon 2013, p.87). It highlights the scope of political power in terms of governmentality that is closely linked to the object of inquiry (Foucault 2003). One of Foucault's main conclusions of the 1978 Collège de France lectures was that "governmentality is to the state what disciplinary techniques are to prisons and what biopolitics is to medical institutions" (Valverde 2007). In sum, the negative framing of migrants and irregular travelers in comparison to EU-citizens on the move facilitates

normalizing the majority and helps gaining support for artificially-powered techniques that anticipate migration flows.

The next section explores ways in which automated border control technologies – together with security professionals – are normalized in the iBorderCtrl discourse. More specifically, it will follow up on its concentration on the majority through discursive neutralization of the migrant figure, strengthening public acceptance.

4.2 Normalization and the Imperative of Free Circulation

So far, it was outlined that anti-foreigner sentiment and the criminalization of the migrant figure functions as means of scaremongering to legitimize modes of surveillance. But how can a racist discourse be strategically introduced into the public domain and evolve into an acceptable and legitimate perspective in perceptions of migrants and refugees? This section explores – besides the normalization of the majority - the normalization of surveillance, underpinned by a strong notion of internal security.

Security discourses are essential to contemporary practices of governmentality because surveillance strategies are normalized[7] by an imperative of internal security to ensure free circulation (open trade) within the EU, in particular the Schengen area. Project Presentations and leaflets prepared to be handed out to the general public appear to showcase an ordinary security control system for travelers, and fully ignore the lie detection component that is at the centre of the project:

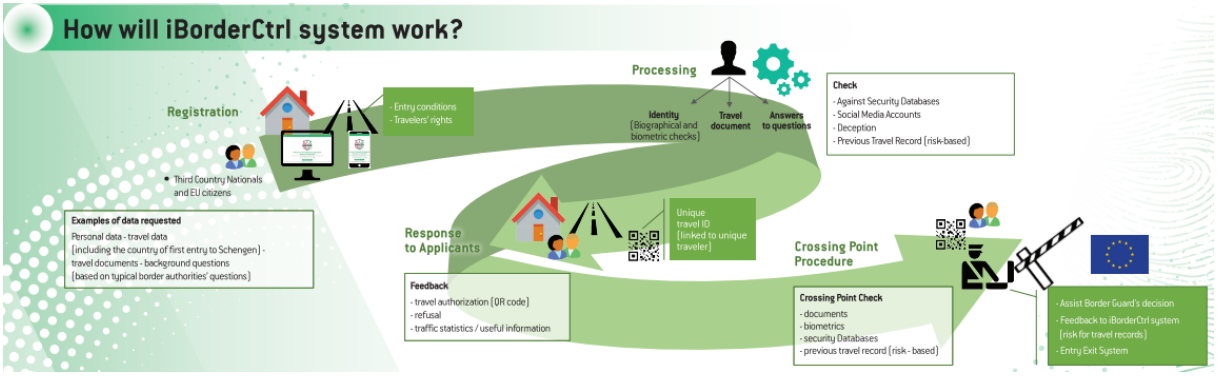

Figure 2 iBorderCtrl system (Source: iBorderCtrl n.d.b)

This normalization concentrates on the majority and represses the minority (Bigo & Tsoukala 2008). More radically, such heterogeneous constitution of security divides between the normal and the abnormal and functions by extirpating potential differences (Aradau & Blanke 2018). This is self-evident in the section of targeted stakeholders named in the project's dissemination and communication plan where actors like policymakers, industrial partners, EU-funded project

[7] Normalization is here understood in Foucauldian terms, referring to how discursive practices backed up by institutional authority establish norms of conduct (Foucault 1979).

representatives, security stakeholders, the general public, even students are enumerated. (Potential) migrants or travelers from countries outside the EU are not considered worth mentioning here – not to mention refugees (see European Commission 2017, p.22-24). The project targets, however, are left in the dark about the program and its main objective.

Here is where the application of neutralizing language comes into play. The use of neutral labels such as "*traveler*[8]", which was used in 5,91% of all citations (European Commission 2018f, p.21), "*passenger*" (0,76%; e.g. in European Commission 2020d, p.23), "*individual*" (1,28%; e.g. in Krügel et al. 2018, p.2), etc. veils the actual concentration on the "*migrant*" (which was referred to in 0,06% of all citations) moreover creates a sort of blindness for the peculiar and baneful discriminatory pattern inherent in concepts of security (Not to mention the term "*refugee*" (European Commission 2018f, p.17), which was used one single time among all citations in the data).

The justification of surveillance strategies in the name of internal security, moreover, appears as a discursive trump card overriding all other claims (Wahl-Jorgensen et al. 2017), offering governments further opportunities to justify their actions (Foucault 1979). The internal security problem is often mentioned in connection to the so-called refugee crisis:

> *"The current situation in regards of internal security against terrorist attacks and the massive migration problem has highlighted the need of a better and more effective border management system"* (Carlos-Roca et al. 2018, p.6)

The emphasis on internal security as the foremost concern and surveillance as a necessary response to threats is deeply connected to Dencik's (2015) idea of "surveillance realism", the idea that "despite seeing, recognizing and fearing the fallacies of the system, how it impacts on our lives, limits our freedoms, and encroaches on our rights, we can no longer imagine society without ubiquitous surveillance". In an article written for the Horizon Research & Innovation magazine, Bilby states:

> *"Research like this will help the EU make citizens safer by securing its borders effectively, without causing long queues and discomfort for travellers."* (2017)

However, this perilous air of neutrality runs like a thread through the material published around iBorderCtrl – and facilitates the building of compact models of disciplinary dispositifs. Next to normalizing surveillance, its exercising power – mainly police agencies and government departments - are not allowed as a source of great uncertainty. Rather, the iBorderCtrl discourse reveals a tendency to portray policing forces engaged in crime prevention and immobilizing suspects as natural, naturally good in fact. Krügel et al. claim, for example, that profiling "*covers the processing of personal data by competent authorities*" (2018, p.3). In his

[8] This code includes both the British and the US-American spelling ("traveller" and "traveler").

book Discipline and Punish, Foucault states that power under surveillance is exercised according to a continuous hierarchical figure that ensures obedience commanded by “good officers” and “men of substance”. (1979, p.195). Within lies deep confidence in the competence of policing forces and border authorities, which O’Shea’s reproduces with this statement in the report to the UK Parliament:

> *“My view is that “inconsequential” decisions by AI components (i.e. the traveler was truthful, no action needed) do not need to be explained to travelers or contested by them. Where a traveller is suspected of deception, the AI system should provide evidence to a human-in-the loop, who will take the decision and comply with the traveller’s rights.”* (2017, p.6)

However, these same authorities exercise disciplinary control according to a binary division of branding (dangerous/harmless; abnormal/normal, etc.), and coercive assignment (where is he; how must constant surveillance exercised over him?) over the excluded on the one hand, and on the other hand, the universality of disciplinary controls makes it possible to brand and alter the outsider (Foucault 1979, p.199). In other words, discursive normalization keeps the repressive security regime from being crushed while avoiding the spreading of a negative image of the developed technologies. One could almost say that these activities resemble brainwashing efforts to gain discipline and public acceptance of police forces. In the next section, it will be outlined how re-bordering and deterrence strategies contradict normalizing discourses and that the notion of internal security is closely connected to the objective of discovering trade benefits.

4.3 Market deployed Surveillance at a Distance.

So far, it was outlined how neutral speech has influenced how the anti-migrant discourse is integrated into the public realm. But it is, moreover, crucial to unravel the complex ties between this air of neutrality around surveillance matters and strong efforts of spreading the belief in their economic potential, to understand the high public acceptance of surveillance. Turning from an understanding of how automated border control produces an Orwellian-type situation towards placing surveillance in a wider context of governmental thought, it suggests itself to look at references to trade benefits made in the iBorderCtrl discourse. The dissemination and communication strategy’s key objective, for example, is “*facilitating further research and discover new market opportunities*.” (European Commission 2017, p.9), whereas the strategic phase is aimed at *“[Maximizing] target market and industry awareness regarding iBorderCtrl system by providing more tangible results*” (European Commission 2017, p.10). The main players actively involved in the project dissemination, however, do not become apparent in the strategy papers.

Stakeholders present the facial recognition (FMT) module as a "*high performance*" mechanism "*designed to increase efficiency […] without reducing security checks*" (Carlos-Roca et al. 2018, pp.1,3). A total of 5,58% of all citations in the analysis refer to the remarkable performance of the project system. Those concerning its innovative character account for 2,82%. The strategic mentioning of neoliberal values like "*effectiveness*" (70 times; e.g. in Crocket & O'Shea n.d., p.3), and "*accuracy*" (110 times; e.g. in European Commission 2018a, p.13), has the effect of increasing the interest of the industry and corporate actors that are in favor of strengthening biometrics and information sharing as modes of border surveillance:

> *"The results of the evaluation revealed that novel technologies can have a significant impact on improving the efficacy, accuracy, speed, while reducing the cost of border control"* (iBorderCtrl n.d.a)

However, for border authorities, the main objective is to spatially and temporally manage the movement of certain people (migrant travelers) and curtail access to asylum application procedures to repatriate them as soon as possible (Aradau & Blanke 2018). The militarization of borders through deterrence strategies comes into tension with normalizing discourses. The systematic neutralization of the migrant figure is further strengthened by the project's recruitment campaign that is submitted to widespread activities on social media to "attract interest of travelers" "*so that event participants will be encouraged to use TUA*[9] *and become "registrants".*" (European Commission 2018f, p.22). Again, there is this rationale of normalizing the technologies inherent in the program as if reducing cost and time at border checkpoints were a selling point for potential customers. An extraordinary high number of citations were linked to the code group "Promotional activities" (778 citations; e.g. European Commission 2017, p.10). This indicates that normalization works hand in hand with liberalism. Moreover, it is not the enemy but the potentially risky traveler that is sought to filter. As a matter of fact, that "*the iBorderCtrl partners will exploit every opportunity for recruiting volunteers*." (European Commission 2018f, p.22), and the application of neutral brandings such as 'volunteers' and 'registrants' reassure the belief in the necessity of surveillance while minimizing the attention given to the profiling of migrants. Through the production of this specific mode of otherness, critical voices are conciliated.

In this respect, Bauman and Lyon note that "[i]n database marketing the idea is to lull intended targets into thinking that they count when all it wants is to count them and, of course, to suck them into further purchases." (2013, p.50), which alludes to the power of marketers seeking new ways of rationalization, intending to lure subjects into sharing personal data for marketing and control purposes. The elimination of choice is thereby seen to facilitate submission to the

[9] The Traveller User Application (TUA) is a pre-registration step of the iBorderCtrl project, instructing travelers to fulfill their obligations and collecting all relevant data in advance (iBorderCtrl n.d.a)

offer, functioning not through coercion but rather through seduction (Bauman & Lyon 2013). This is also portrayed in actions on social media aimed at gathering followers and members for “effective dissemination” (European Commission 2017, p.34), as for example on the iBorderCtrl Twitter profile:

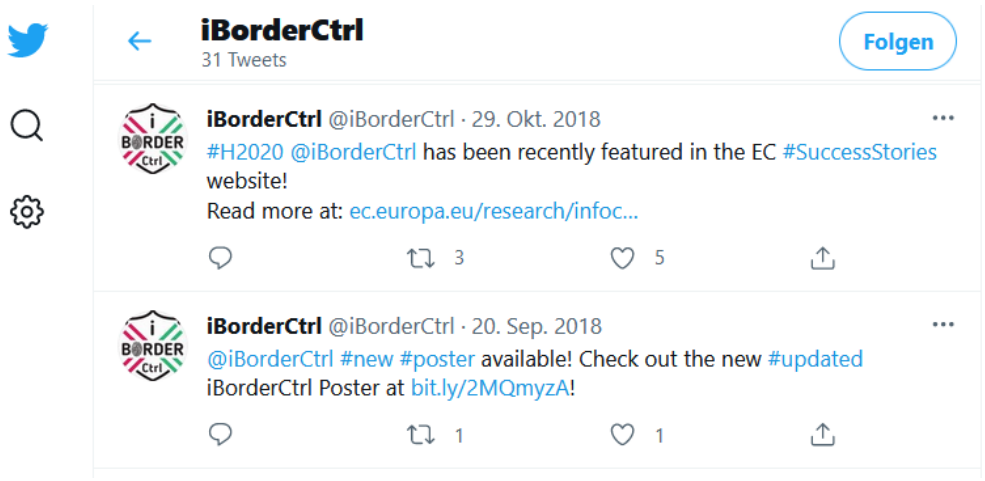

Figure 3 iBorderCtrl Twitter profile (Source: iBorderCtrl 2018)

Moreover, in the iBorderCtrl discourse, the well-functioning of the European economy becomes closely connected to the notion of internal security:

> *“Biometrics arise as a solution when considering the call for a maximum-security level and simultaneously limited operational costs and time”* (Crockett & O’Shea n.d.)

Bigo (2008) stresses that this new form of political rationality devoted to all-encompassing surveillance takes place at a distance beyond national borders (deterritorialization of police activities). The belief, that the relocation of border controls from inside the EU to the external border will create freedom of circulation for all inside the EU is, says Bigo, a rhetorical miscalculation. Significantly, security professionals remain silent on the link between the suspension of internal controls and more control of foreigners’ movement, or “any citizen who does not correspond to the a priori social image that one holds of the national identity” (ibid, p.19). This has caused a disjunction between the discourse of internal security and practices carried out (ibid). “In fact, the border controls within Europe are not dismantled as was promised by the rhetoric of free movement and its checks and balances. Control is privatized, delegated to airline companies and airports, which, in turn, subcontract the job to private security companies.” (Bigo 2008, p.21). This shift lies at the very core of liberal governmentality. The delegation of border control tasks to market corporates functions, inter alia, through the clustering of iBorderCtrl with other initiatives dedicated to border control such

as the Protect project[10]. O'Shea illustrates this in a report to the UK House of Lords Artificial Intelligence Select committee:

> *"[L]arge corporations will put significant (financial) investment into collecting (and hopefully vetting) big data collections and will wish to protect their investment while they produce saleable AI from it."* (2017, p.4)

This is, inter alia, ensured via dissemination activities aimed at tackling other EU-funded research projects concerned with border control and surveillance:

> *"In the next period, iBorderCtrl will continue the joint activities with PROTECT project and is already planning to interact with other border control and border surveillance related research projects (e.g. the SMILE project led by CERTH)."* (European Commission 2017, p.19)

In response to the rising number of individuals seeking refuge in Europe in the last decade, an increasing interest in artificial intelligence and large databases lead to so proliferation of security companies developing smart border management solutions, many of them funded by Horizon 2020. Out of all collected citations, 13,66% were somehow connected to the term "*technological device"*. These dynamics certainly indicate an emergence of techno-solutionism coming along with human rights violations (Begault 2019).

In sum, the proliferation of stakeholders and industry corporates regarding innovative security technologies smooth the way for a new logic of surveillance, privileging ministers and security advocates to the extent, that they, through access to networks of databases, understand the situation at external borders leaving those that are most affected by such efforts in the dark (Bigo 2008) Thus, security professionals are closest to the dispositif (Bauman & Lyon 2013). The last section will outline several ethical problems inherent in the program and how ethical considerations are supposedly minimized in the iBorderCtrl discourse.

4.4 Ethical Considerations and Accountability

Until now, the discourse of the iBoderCtrl project showed how the normalization of surveillance and its advocates, facilitated through neutralizing language, goes hand in hand with liberal governmentality. Significantly, the discourse implies that the main objectives of the program are economic and that ethical considerations are left at the margins of the project discourse. However, that a border management tool powered by artificial intelligence would be an improvement because it could generate more objective conclusions than a human border guard is a considerable argument, so why are these dynamics problematic?

[10] The Protect project delivers biometric a priori data to border agencies performing risk analyses while the individual is traveling to the checkpoint (European Commission 2018f).

iBorderCtrl was terminated at the end of its trial phase because multiple human rights organizations raised legal and ethical concerns. According to Begault, “affect recognition does not stand up to scrutiny and is being applied in dangerously irresponsible ways. *iBorderCtrl is a case in point*.” (2019). In any case, biometrics have been proven to be inherently biased, learning prejudices reflected in the data used to train them (ibid). One of the founders of the iBorderCtrl project himself admits that research shows that facial recognition algorithms are worse at recognizing minorities when they have been trained on sets of predominantly white faces (Bittle 2020). However, media coverage on the project reveals that the lie detection component is certainly the most contested (Al-Youssef 2021; Begault 2019; Gallagher & Jona 2019; Lomas 2021; Wiese 2019; Wolfangel 2018). First and foremost, the lack of evidence that emotional detection is an accurate tool to measure truthfulness makes a project that conceals ethical evaluation and project result reports with no public scrutiny particularly questionable. “*The whole system is set up very badly*”, says civil liberty activist Patrick Breyer and puts straight the economical project aim to “*develop stuff to sell*” (Lomas 2021).

Eventually, the EU funds “*unethical and unlawful technologies*” (Lomas 2021). Questions about the compliance with fundamental rights such as the right to dignity, privacy, equality, and non-discrimination (ibid) are posed by the European Commission, which stated that “*ethics is given the highest priority in EU-funded research*”, although a self-regulatory ethics check conducted in March 2019 only yielded “*satisfactory*” but did not provide any further information (ibid). Instead, it is argued that a machine-based interview can be used to detect deception although the size of the training dataset was relatively small and not representative:

> *“The un-optimized networks gave (as expected) high results when utilizing a cross validation train-test strategy, whilst obtaining an average classification of 75% on both truthful and deceptive interviews”* (O’Shea et al. 2018a, p.8)

This statement indicates a lack of sufficient training data, which prohibits generalizing the findings. The deceptive dataset for example consisted of four individuals with either an Asian or an Arabic background and thirteen of “*white EU*” (O’Shea et al. 2018a, p.8) citizens. The truthful scenario was run with twelve Male and three female participants (O’Shea et al. 2018a). However, a possible racial distortion does not seem to be of great concern. Instead, it is argued that:

> *“The dataset collected for this experiment contained […] diversity in terms of gender and ethnicity”* (O’Shea et al. 2018a, p.8)

The average classification rate of 75% would mean that the system raises alarm at every fourth control. Significantly, O’Shea et al. recognize that the dataset “*might not have been large enough to train a classifier more effectively*” (2018a, p.8).

Moreover, “the inputs an individual gives are sent to a back-end system which calculates risk scores determining if an individual could be lying based on a comparison with the stored data and the micro-gesture analysis.” (Bilby 2017). “*The ADDS module then uses the risk scores to change the avatar attitude when the next question is asked*” (O’Shea et al. 2018a, p.3). In case the avatar changed its attitude however, this may cause the interviewee to behave insecurely and could influence the automated assessment of the learning machine (Wolfangel 2018). It also provokes a tendency for border authorities to think someone is indeed lying and could influence decision-making in a second screening (ibid):

Figure 4 Adaptive Avatars (Neutral, Sceptical, Positive), (Source: Crocket 2018)

“*The risk score could or almost certainly would to some extent pre-empt or anticipate the decision that will be taken by the border guard*.”, Krügel et al. argue, which is why they recommend ethical supervision and training for border guards (2018, p.5). While stakeholders of the project stress that through the involvement of a human border guard, entry refusals are not solely based on artificial assessments, in practice this becomes impossible. Considering the high number of travelers crossing borders and the political reality pressing for restrictive border policies, sufficient training of staff to guarantee judgments that are independent of given risk scores is, according to Begault, unlikely (2019).

Ultimately, the opaqueness and secrecy of algorithmic security practices mask patterns of discrimination and partition (Aradau & Blanke 2018). The iBorderCtrl project is a ‘black box’ technology of psychological profiling**,** which means that the machine learning approach is often incomprehensible and can be used to discriminate (Crockett et al. 2018). A maximum level of transparency requires detailed technical information, persons affected by an automated

individual case decision must be provided with, also protected under EU legislation[11]. The information provided should be intelligible for a subject and provide sufficient knowledge. Indeed, growing demand for increased information and communication (Wahl-Jorgensen et al. 2017) is underlined by the use of words such as "*transparency*" (O'Shea et al. 2018b, p.1), and "*open access*" (European Commission 2018b, p.11), which revolve around a strong notion of accountability, aimed at enforcing legitimacy and trust in the system. Wahl-Jorgensen et al. argue that normalizing surveillance also means twisting arguments in favor of transparency, ultimately minimizing concerns about privacy and individual rights, accenting the value of "law-abiding" citizens who enable control regimes." (Wahl-Jorgensen 2017, p.12).

However, the responsibility to share information on how the risk score tool of the ADDS module has reached its decision is systematically downplayed by stakeholders that are determining the inability of the subject to understand a system that is "*efficiently inexplicable to humans*" (O'Shea 2017).

> *"Therefore, information should be less detailed than it would be theoretically possible if this ensures that the data subject can actually understand the information."* (Crockett et al. 2017, p.4)

By stating that the "*average*" user (O'Shea 2017; Crocket et al. 2018, p.4) "*will most probably not be able to understand such information*" (Crocket et al. 2018, p.4), data controllers play into their own hands whose knowledge, in general, constitutes an advantage in comparison to the data subjects. At the same time, releasing confidential data is a complex issue because it is concerned with public security. Crockett et al. declare "*the explanation of an algorithm without leaking trade secrets*" as a specific challenge for the technical community (2018, 6), and conclude that:

> *"[…] it might be questionable in how far this would be to provide sufficient information necessary to ensure a fair and transparent processing […]. Consequently, a proper solution for this issue remains unclear."* (Crockett et al. 2018)

These patterns of downplaying are furthermore manifested in the confidentiality of the project deliverables. Breyer seeks the release of official project documents with information on ethical and legal evaluation, as well as marketing strategies and results. He hopes to see publicly funded research compliant with EU fundamental rights, "*especially in the case of pseudoscientific and Orwellian technology such as the 'iBorderCtrl video lie detector'*." (Lomas, 2021). In sum, it is no secret that the primary goal of the project is to "*guarantee the impact on European economy*" (European Commission 2018b, p.8) through dissemination strategies,

[11] See EU Directive 680/2016/EU: "subjects of biometric decision making have a right to be informed of automatic decision making, that it is made transparent and that the subject has the right to express his/her point of view or the right to contest the decision."

and that few ethical discussions are not sufficient to ensure compliance with migrant's rights whereby individuals are expected to trust a system with little accountability.

4.5 Preliminary Summary

To conclude, the findings are shortly summarized. To answer the first sub-question, (1) *according to what rules phenomena of the security discourse are objectivized,* it was laid down, what role the discourse of the iBoderCtrl project attributes to its addressees. There was a clear trend towards distinguishing between crowds enforced via dialectic discourses functioning through the criminalization of migration and through the neutralization of the migrant figure. This neutralization hides the systematic treatment of migrants and refugees as criminal suspects. In addition, normalization efforts contribute to public acceptance of AI-supported border checks, ascribing considerable weight to both surveillance technologies and security professionals. To answer, (2) *from what subject-position the discourse is formed,* it was crucial to consider the purpose and stakeholders of the project. Throughout the analysis runs an apparent incentive to reduce the cost of border control and maximize profit targeting corporate interest. Thus, it is security companies and politicians that are in favor of restrictive border management who formulate and reproduce discourses aimed to render the project as rewarding and vital. More specifically, they have access to the networks of knowledge and gain immense advantages from Big Data. Reflecting on (3) *how the aspired theories are supposed to constitute better solutions to the framed security problem than others,* there is a strong belief that artificial intelligence and Big Data power a better and safer future. How techniques of anomaly detection are built upon a heterogeneous image, focusing on an exclusive belief of similarity, facilitates the detection of the dissimilar, of the 'outsider'. What matters in the security domain is thus the filtering of potential threats as the only functioning method to minimize undesired and maximize the desired circulation. This is (4) *how the discourse is reflected in dispositifs.* creating a common European identity to which you either belong or you do not. Dispositifs are always complex types of power structures importing the need for constant surveillance to detect suspicious activity that pervades all spaces of society.

To sum up, the findings are in accordance with what was expected from the theory. The discourse revealed a dialectic relationship between securitization dynamics and attempts to veil these efforts via neutralizing language, making a majority believe in the necessity of surveillance and promote its implementation. In turn, this implies that the political reality cannot be detached from discourses. Further, the iBorderCtrl project can be interpreted as technology of security complementing the whole apparatus of security. The imperative to preserve internal security is deeply interconnected with the promotion of economic growth supposed to preserve a volatile status quo.

5 Conclusion

5.1 Answer to the Research Question

The iBorderCtrl discourse provided a key to crystalize a critical discussion about AI-powered surveillance. This thesis investigated how project documents and newspaper articles covered the research program and its aftermath. Particularly, the interest was to examine how rhetorical elements justify measures taken to act against potential security threats and uphold internal freedom of circulation. Through the weight of opinion stemming from ministers and security professionals combined with the relative inattention given to the notion to filter the potential migrant seeking refuge on European soil the program was normalized and justified. The thesis highlighted the discursive normalization as part of a strategic process of discursive practice wherein racist and anti-migrant positions have been enacted as an integral part of the EU security agenda. But here is the interesting issue: Legitimation processes do not only function through arguments that are heard or read but also by exclusion, meaning that if certain issues are systematically downplayed, veiled, or remain unseen, it is impossible to establish critical debates around automated border control. However, media coverage around the program appeared as a more critical source clearly identifying 'migrants' and 'refugees' as the target of the different iBorderCtrl components, pinpointing to ethical questions regarding the deprivation of migrants' and refugees' rights inherent in program modules that deployed biased technologies funded by the EU with little international law.

These insights become even more apparent when analyzing them in the light of Foucault's conceptions of security. Therefore, the main research question shall be answered: *How can the case of the iBorderCtrl discourse be interpreted as a biopolitical tool contributing to the further development of a Fortress Europe?* Foucault's remarks indicate that the iBorderCtrl project can be interpreted as a panoptic machine carrying out experiments with the human body, to train or correct individuals according to a popular image of a homogenous European identity located in a fortress. Within it, individuals are capable to move freely from one place to another. The peril to internal security is practically evident in the case of the isolated individuals. The dispositif is created through the logic of anomaly detection, where skin color, an accent, or an attitude can lead to the evacuation of unknown masses (ibid). Surveillance then not only serves the purpose of observation but also that of a laboratory, namely, to alter behavior (Foucault 1979). Control is taken over life by measuring phenomena in statistical ways, collecting enormous amounts of (biometric) data, and, upon this knowledge, deciding who should be rounded up while providing little guidance on who should be permitted. This is in essence what biopower is about, the right and the capability of "making live and letting die" (Foucault 2003, p.247). Contemporary power is thus footed in the disassociation of forms of life by sovereign exceptionalism.

5.2 Practical Implications

This thesis has found evidence for biopolitical power relations that are inherent in the iBorderCtrl project. There are, however, some limitations to this study which are discussed in this section. Twenty-five documents are not able to represent the full scope of the project. Because ethical assessments and result reports have not been made accessible to the public, the assessment of ethical problems is further complicated. What this thesis did is offering a small insight into how the automated border control mechanism is integrated into the public discourse.

Parliament member Patrick Breyer filed a lawsuit against the project before the European Court of Justice (CJEU). He argues that the EU often funds illegal technologies that violate fundamental rights and civil rights organizations warn that the technologies further complicate for refugees to escape from wars and other difficult life situations (Al-Youssef 2021). The thematization of ethical issues by several human rights advocates was not in vain in the past. Indeed, it has led to the termination of the experiment. Nonetheless, it is not clear when and where a similar program will be installed in near future. As of 2023, the European Commission plans for third-country nationals to share biometric information with digital "Avatars" before they cross the border to prevent longer controls that could occur due to the new entry-/exit system (EES). Open to discuss remains the question where these insights leave actors who wish to change the situation but feel powerless to challenge abusive state action (Davitti 2019).

Moreover, it is difficult to measure if automated decision-making is less objective than the assessment of a human border guard. However, it must be acknowledged that automated decision-making, if deployed in the future, must be radically improved, and assisted by human judgment. For example, researchers could train facial recognition technologies on a more heterogenous sample population. If the means were used properly, one could, for example, use artificial intelligence to inform the population in terms of crime prevention (Lomas 2021) or they could serve humanitarian aims such as rescue missions at sea (Karlsrund, Rosen 2013, Glušac 2014).

5.3 Implications for Future Research

Admittedly, the findings do not leave much space to expect the status quo to radically cease hegemonic power relations. But the exhaustion of critical scholars towards automated border control might help facilitate migration management that is in line with international law. To unmake the concept of security less antagonistic understandings of difference are needed. For that purpose, further research on the topic is urgent. Although Foucault held his lectures more than thirty years ago, his theorizations are still of great importance, and it is suggested here to

build on the strengths of his understanding of security. But there are still many open questions on how to negotiate the unfolding power of new technologies and their impact on the public. In particular, critical security studies should be enforced beyond Western scholarly work and expanded further towards the Global South to promote different perspectives and uncover different questions. Notably, the European border control system is not the only oppressive regime in the world. To mention a few, the Mexican-US-American border or the Chinese hukou system deploy similar technologies (Vigneswaren 2020). For further research, it could be useful to analyze how much is invested in anti-smuggling efforts compared to humanitarian protection. Further, it could be helpful to examine the limitations of international law that apply to inventions of new security technologies. It is also time to ask how the climate of crisis discursively justifies extraordinary measures while state responses to the Covid-19 crisis include numerous examples of migrants and refugees being pushed back and segregated. Seeking alternative narratives, it might also be necessary to look outside the traditional toolbox and be sensitive to political alternatives and potentialities for change. To sum up, analysts need to further complement existing literature in the field to encourage reformist political agendas.

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Appendix I – Data for the Analysis

Official Policy Deliverables

European Commission (2017). Dissemination and Communication Plan legible. https://netzpolitik.org/2021/eu-projekt-iborderctrl-kommt-der-luegendetektor-oder-kommt-er-nicht/

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Appendix II – Data from Atlas.ti

Code-Document Table: Code Groups

	Deliverables 11 6818	News cover... 4 549	Presentation 5 195	Project Publ... 9 1709	**Totals**
Biom... 5 1218	**930** 11,31%	**55** 0,67%	**22** 0,27%	**259** 3,15%	**1266** 15,40%
Calcula... 3 912	**784** 9,54%	**104** 1,26%	**35** 0,43%	**172** 2,09%	**1095** 13,32%
Crowds 7 743	**568** 6,91%	**49** 0,60%	**36** 0,44%	**218** 2,65%	**871** 10,59%
Emotio... 4 283	**236** 2,87%	**109** 1,33%	**14** 0,17%	**143** 1,74%	**502** 6,11%
Innovat... 5 210	**175** 2,13%	**21** 0,26%	**5** 0,06%	**31** 0,38%	**232** 2,82%
Knowle... 3 682	**495** 6,02%	**32** 0,39%	**22** 0,27%	**184** 2,24%	**733** 8,92%
Market... 4 120	**99** 1,20%	**3** 0,04%	**2** 0,02%	**17** 0,21%	**121** 1,47%
Perfor... 6 417	**352** 4,28%	**20** 0,24%	**5** 0,06%	**82** 1,00%	**459** 5,58%
Promot... 5 768	**738** 8,98%	**9** 0,11%	**9** 0,11%	**22** 0,27%	**778** 9,46%
Restrict... 4 219	**167** 2,03%	**11** 0,13%	**2** 0,02%	**70** 0,85%	**250** 3,04%
Techno... 7 716	**579** 7,04%	**56** 0,68%	**11** 0,13%	**146** 1,78%	**792** 9,63%
Techn... 4 1105	**1002** 12,19%	**21** 0,26%	**9** 0,11%	**91** 1,11%	**1123** 13,66%
Totals	6125 74,50%	490 5,96%	172 2,09%	1435 17,45%	8222 100,00%

Appendix III – Coding Scheme explained

CONCEPT	KEY TERMS
Data Subjects Entity with specific features of governmental intervention (Foucault 2003)	*Population*: this code captures the subjects formed with words such as “migration”, “third country nationals”, “illegal”, “passenger”
	Calculation: this code is applied to language implying the aim of crowd control, such as “detect*”, “control”, and “calculation”
	Biometric identity: this code captures references to the construction of data subjects such as “biometric*”, “fingerprint*”, “facial recognition*”, “vein scanners”
	Emotional detection: this code captures words that emphasize the aim to analyse patterns of non-verbal behavior such as “deception”, “spoofing”, “truth”, “emotion”
Governmentality New form of rational practices through which subjects are governed (Tierny 2008)	*Market orientation*: this code is ascribed to language indicating a guarantee of the economic potential such as “economy”, “investment”, “market”
	Promotional activities: this code is applied to advertising language such as “promotion”, “disseminat*”, “communication”, “audience”, “stakeholder”
	Innovation: this code is applied to keywords indicating the innovative character of proposed devices such as “innovation”, “optimization”, “speed”, “comfort”
	Performance: this code is applied to keywords such as “accuracy”, “efficiency”, “effectiveness”, “success story”
Security Dispositifs Network of strategic formations developed in a certain historical era to react to urgencies (Exercise power within the social body), (Foucault 2003)	*Technologies of security*: this code is applied to securing discourse such as “threat”, “terrorism”, “security”, “risk”, “safe”, “freedom”, “military”
	Knowledge production: this code is applied to statements suggesting databases against fraud and forgery such as “surveillance”, “database”
	Techno-solutionism: this code refers to technology and device recommendations believed to help manage migration in a more effective way such as “technolog*”, “hardware”, “software”, “device”
	Restrictive action: this code captures the predominance of the action of the state and industry such as “govern*”