“Our Role Is Technical Rather Than Political”: Explaining the Ascendancy and Proliferation of ‘Smart Borders’ in the European Union

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Introduction

*I must Create a System, or be enslav’d by another Man’s.*

– William Blake, 1804

Migration control has been one of the most politically contested topics in recent years, reflected in both the polarization it has caused and the magnitude of resources that have been poured into new border security tools across the globe. The so-called ‘refugee crisis,’ which hit Europe in 2014-2015, has resulted in a vast expansion of the EU’s border control resources, notably an array of new automated surveillance and screening tools costing billions of euros. US President Donald Trump’s infamous call to ‘build a wall’ at the US-Mexican border—despite conjuring up mental images of a concrete fence snaking across the landscape from the Gulf of Mexico to the Pacific Ocean—has instead prompted bids to construct a 100-mile-deep, high-tech ‘virtual wall’ surrounding the entire nation. In India, political controversies surrounding migration from Bangladesh and Pakistan have resulted in a steady increase in the budget of the Border Security Force and significant investments into new high-tech border control tools.

In the twenty-first century, particularly within the European Union and the United States, a key stake in debates regarding migration has been national security. Of course, national security concerns have affected the regulation of cross-border movements previously as well, and indeed provided the grounds for one of the earliest examples of modern border control policies: in post-Revolutionary France, the need to extract military services following the introduction of the *levée en masse* was an important factor sustaining the controversial restrictions of cross-border movement up until the Congress of Vienna in 1815. However, following the terror attacks in the United States

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1 Blake (2002 [1804]: 210).
3 Solon (2018).
4 Krishnan (2019); Arora (2018).
5 Woloch (1986).
on September 11th 2001, a new narrative regarding the migration-security nexus has become dominant: migration has become conceptualized as a conduit for transnational terrorism. In the post-9/11 period, migration and transnational terrorism have merged together such that ‘every refugee and migrant has now explicitly become a potential terrorist—and vice versa.’ We are told that the nature of the terrorist threat is much more diffuse and mobile than migration-related security threats have previously been. Furthermore, given the economic and political stakes that states have in keeping their borders open to individuals, information, and goods which constitute the contemporary globalized economy, no longer is it viable to inspect every passenger thoroughly or to ban entire groups from travel—President Trump’s highly controversial travel ban notwithstanding. Thus, the main goal particularly for the European Union, warier of applying Trumpesque travel bans, is to strike a balance between keeping borders open for desirable ‘bona fide’ travelers while filtering out undesirable ‘risky’ populations.

This story about the potential dangers arising from migration—as well as the suitability of addressing these threats through high-tech surveillance systems—has become so widespread as to seem beyond question. Surely Islamist terror attacks within Europe over the past two decades have been carried out mainly by immigrants from the Middle East? Are not the external borders of the EU the main line of defense against such dangerous individuals? Isn’t it obvious that with the abolition of internal borders, the external borders of the EU must correspondingly be strengthened to ensure security and stability? If we are to somehow guard against these threats, which are diffuse and unavoidable in the age of globalization, do not high-tech surveillance systems offer a solution which is at once efficient, effective, and objective? And is not the main obstacle to effectively controlling our borders the fact that ‘we don’t know who these people are,’ and the solution

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6 Andreas (2003).
7 Nail (2016: 159).
8 BBC (2018).
9 As suggested by former defence secretary Liam Fox. See Sparrow (2016).
therefore to intensify our information-gathering efforts through the deployment of large-scale information systems?

Commonplace though they are, all of the above assumptions are in fact highly contestable. First, the routine assumption that most Islamist terror attackers have been migrants is challenged by the empirical figures. The Danish Institute for International Studies found in May 2017 that a majority of Islamist terror attacks in the EU between 2001 and April 2017 were committed by European citizens, rather than non-European migrants, as shown in Table 1 below. Furthermore,

<table>
<thead>
<tr>
<th>Migration status of attacker</th>
<th>EU citizens</th>
<th>Refugees</th>
<th>Asylum-seekers</th>
<th>Legal migrants</th>
<th>Illegal migrants</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number (%)</td>
<td>50 (73.5%)</td>
<td>0 (0%)</td>
<td>3 (4.4%)</td>
<td>14 (20.6%)</td>
<td>1 (1.5%)</td>
<td>68 (100)</td>
</tr>
</tbody>
</table>

Table 1. Number of terrorist attackers in Europe between 2001 and April 2017 by migration status

nearly all immigrant terror attackers were in fact legally presiding in the EU; tighter policing of illicit immigration would have no impact on apprehending such individuals in the future. Second, the link between the abolition of internal European borders and strengthening external borders rests on two related assumptions, namely ‘that control of the illegal movement of goods, services, and persons happens primarily at the border, and that the free movement of persons is constituted by abolishing border controls.’ However, following the abolition of internal border controls, many Member States witnessed a significant increase in personal identity controls within national territories, demonstrating that control of movement within Schengen does not happen primarily at the external border but in fact through ‘scattered security checks’ across the Schengen area. Moreover, as highlighted by the Council of the European Union itself, most illegal immigrants are in fact thought to be visa-overstayers rather than persons smuggled into the country.

10 Data from Danish Institute for International Studies (2017). See also Crone et al. (2017).
Furthermore, stringent border controls are not the main obstacle to freedom of movement within the EU, as ‘the granting of work permits, residency permits and providing access to welfare provisions and social assistance are undoubtedly more important instruments for controlling, improving or limiting the free movement of people.’

Third, the assumption that a main security shortcoming of contemporary border controls is a lack of information about ‘who these people are’ is dubious, as most perpetrators of terror attacks were already known to authorities.

Finally, the assertion that large-scale information systems constitute an efficient, effective, and objective solution has been repeatedly challenged on grounds such as their high costs, human rights concerns, legality under EU legislation, as well as their operational viability and effectiveness in successfully identifying and apprehending ‘risky’ travelers.

Yet, on the basis of a preliminary examination of recent developments in EU external border controls, one might be forgiven for taking as unquestionable truths these contestable assumptions regarding the migration-terror nexus and desirability of large-scale information systems. Since the European Council requested that the Council and Commission devise a plan for ‘more effective control of external borders’ in December 2001, the preferred policy solution of the Commission has been the ‘smartening’ of borders through the use of high-tech information systems and automated technologies. ‘Smart borders’ are seen as a solution which can simultaneously meet ‘the two objectives of enhancing security and facilitating travel.’ The term ‘smart borders’ refers to technologies such as biometric identification tools, automated risk

14 Huysmans (2000: 759); See also Anderson (2010).
15 Crone et al. (2017).
17 Note that the European Council and the Council of the European Union are two separate institutions.
18 European Council (2001b: para 42).
20 This thesis deploys the term ‘smart borders’ when referring to technologies such as biometric identification tools, automated risk profiling, and interlinked information systems which are used for border control purposes. In particular, it is used to refer to the three main border control tools examined in this thesis, namely the EES, ETIAS, and IF. This is largely in line with the existing academic literature and with colloquial usage by border control officials and security professionals. The term ‘smart borders’ was, however, sometimes used by the Commission in a narrower sense referring only to the Entry-Exit System and the Registered Traveler Program, particularly between 2011-2016, although lately that usage has again fallen out of favor.
profiling, and interlinked information systems, which aim to automatically identify ‘risky’ individuals while allowing ‘trusted’ travelers to cross borders unimpeded. The number and scale of ‘smart border’ technologies in the EU has skyrocketed over the past two decades. The EU external border is now characterized by a proliferating set of abbreviations and acronyms which describe its multiple constituent information systems: SIS II, VIS, EURODAC, EUROSUR, API, PNR, ECRIS-TCN, EES, and ETIAS, to name a few.

None of the criticisms outlined above have had much effect on ‘smart borders’ proposals over the past two decades, which have consistently proliferated even as the salience of migration-related security concerns has waxed and waned in the post-9/11 era. Simply highlighting these criticisms does not explain this trend, yet it does suggest that the proliferation of large-scale information systems at the EU external border has not been inevitable. What, then, explains the hegemonic position that these systems have come to enjoy as a preferred policy option for border management in the EU today? This thesis challenges conventional accounts of security policy in International Relations, which assume that states rationally respond to readily identifiable changes in their external threat environment. In contrast, this thesis demonstrates that the proliferation of ‘smart borders’ is better understood as a path-dependent outcome of the securitization of migration at the EU level, which became ‘locked in’ in the 1990s, while the proliferation of ‘smart border’ technologies in the past decade is explained by a positive feedback loop resulting from technological momentum. These claims are unpacked below.

The Objectives of this Research

This thesis seeks to untangle the many potential drivers of EU border security policies in order to explain the ascendancy and proliferation of ‘smart borders.’ It focuses mainly on developments since December 2001, when the European Council asked the Council and Commission ‘to examine

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the conditions in which a mechanism or common services to control external borders could be created.22 In so doing, this thesis adds theoretical and empirical depth to existing research on security, migration, and technology in international affairs. Its main research objective is to explain how and why the deployment of ‘smart border’ technologies has become perceived as so necessary and desirable that it now seems commonsensical and inevitable, despite the empirical contestability of the underlying assumptions informing their deployment. The main research question can thus be succinctly formulated as what explains transformations in the preferred policy tools for managing the EU external borders since 2001?

In order to answer this main question, the research is divided into three subquestions, which relate to the commonplace assumptions that have justified the ascendance and proliferation of ‘smart borders.’ Answering these questions will highlight the multiple political processes which together have resulted in the technologization of the EU external borders since 2001.

First, how and why has migration been securitized within the European Union? A crucial assumption underlying the expansion of surveillance and security technologies at the EU external border is, of course, that these technologies play a significant role in preventing threats to security, particularly ‘terrorist offences or other serious criminal offences.’23 Potential linkages between migration and terrorism have been particularly salient in political discourse and policy proposals, and initiatives to strengthen and expand border controls have often followed hot on the heels of terror attacks within the Schengen zone.24 Yet, as highlighted above, the empirical evidence regarding the relationship between terror attacks and migration is much more ambiguous, if not outright contrary to this assumption. This suggests that the linkages between migration control and counter-terrorism are the result not of a straightforward threat-response dynamic, but rather more contested political processes through which migration has become understood as a security issue.

24 An illustrative example is the terror attack in Madrid in March 2004. See Léonard (2015: 312).
In order to understand the nature of the technologies deployed to tackle this issue, it will be instructive first to understand how and why migration has been moved onto the security agenda.

Second, what determines which technical tools are developed to tackle migration-related security issues? Another commonplace assumption underlying the proliferation of large-scale information systems at the border is that a lack of information about migrants has been one of the main shortcomings of existing border security systems—both in the sense that more information could have prevented terror attacks, and that in the age of globalization, data analysis provides a way to balance openness and control at the border by avoiding physical checks—thereby justifying an increased focus on ‘smart border’ technologies. However, this assumption can be and has been empirically challenged on both accounts: first, a vast majority of terrorist attackers were known to authorities, and, second, it is unclear whether technologized border checks result in quicker border crossings. This raises the possibility that the perceived suitability and desirability of particular policy tools is the result of political and contingent processes rather than an inevitable fit between readily identifiable problems and obvious technical solutions thereto.

Third, what are the intended and unintended effects of new border security technologies on migration management policies in the EU? An assumption that has been particularly influential in justifying high-tech border security systems has been that they are at once more effective, efficient, and objective than manual border checks in filtering out ‘risky’ individuals from trustworthy ‘bona fide’ travelers at the border. However, this assumption has been highly contested, and as will be shown below, even EU officials responsible for the deployment of ‘smart borders’ have acknowledged the lack of empirical evidence to support this claim. This raises the question of whether these systems produce other, less obvious effects which allow for their continued proliferation. A closely related question is whether these effects have been foreseen and intended by actors promoting ‘smart border’ technologies, or whether they are unintended, suggesting that the technologies themselves have shaped the border security policy agenda.
The Argument

This thesis challenges the traditional account of security policy formation, according to which post-2001 border security policies are mainly a clear-cut response to the new threat environment ushered in by globalization and made readily apparent by terror attacks in the United States on September 11th 2001, in Madrid on 11th March 2004, in London on 7th July 2005, and other attacks since. In contrast to that view, this thesis develops an alternative account of the ascendancy and proliferation of ‘smart borders’ in the EU, which is better able to explain transformations in the preferred policy tools for managing the EU external borders since 2001.

With regard to the first subquestion guiding this research, I find that securitization has not been a clear-cut response to exceptional events such as the 9/11 attacks. Rather, diffuse and politically contested institutional developments in the late 1980s and early 1990s laid the basis for a critical juncture for EU migration control policies between 1992-1997. The outcome of this juncture was that the Commission became heavily invested in promoting a conceptualization of migration as i) a transnational security threat best dealt with at the EU level, and ii) an issue which requires significant centralized technical expertise in order to be effectively tackled.

Second, the choice between alternative tools to tackle migration-related issues cannot be explained by empirical evidence of security threats, or evidence of the suitability of large-scale information systems in tackling such threats. Rather, it is explained by institutional mechanisms of path dependence which followed the critical juncture of the 1990s and, since the inception of the Integrated Border Management agenda in 2002, technological momentum, understood as the tendency of technical systems to become more influential upon human action as they become more mature and complex. These mechanisms have resulted in a positive feedback loop which explains the proliferation of ‘smart borders’ in the EU.

Third, although the full impact of ‘smart borders’ has not yet materialized as their development and deployment is ongoing, they have already had significant effects. The ‘smart borders’ agenda has resulted in the expansion and consolidation of the Commission’s competences,
along with diminished oversight of its actions. It has also resulted in increased surveillance and suspicion of migrants and refugees. Although likely a byproduct of the Commission’s competence maximization efforts rather than directly intended, the Commission has benefitted from the reification of the securitization of migration and has been dismissive of these adverse effects. Finally, a key effect of ‘smart borders,’ originally unforeseen and unintended by the Commission, has been the institution of a positive feedback loop in the EU border security policymaking process. This feedback loop has ensured the proliferation of large-scale information systems for border control purposes in the EU—despite a lack of evidence to prove their necessity or desirability—and has further undermined traditional legal safeguards, rights to privacy and data protection, and accountability mechanisms in the context of EU external border controls.

**Research Outline**

**Research Design**

The research questions above are addressed through a qualitative case study of European Union external border management policies. Chapter 2 provides historical background by examining developments in the 1980s and 1990s, while the substantive analysis in Chapters 3 and 4 focuses on the development of ‘smart borders’ from 2001 to early 2019. The research focused mainly on three border management tools: *i*) the Entry-Exit System (EES), *ii*) the European Travel Information and Authorization System (ETIAS), and *iii*) the Interoperability Framework.

**Methodology and Data Collection**

This research relied on Actor-Network Theory (ANT) to guide empirical data collection and interpretation. Despite the (contested) use of the word ‘theory’ in its name, ANT does not seek to draw generalizable conclusions from a range of particular examples. Rather, ANT is more usefully understood as a set of methodological tools, which focuses on better incorporating nonhuman objects into social scientific analysis by ‘leveling divisions [between social and material categories]
usually taken to be foundational.\textsuperscript{25} ANT captures the role of nonhumans by focusing not only on intentional action by humans, but also on other forms of independent causal effects by both humans and nonhumans, many of which will be found somewhere ‘between full causality and sheer in-existence: things might authorize, allow, afford, encourage, permit, suggest, influence, block, render possible, forbid, and so on.’\textsuperscript{26} A central question for ANT-inspired research is thus: ‘what is the role of a given object in shaping social relations?’\textsuperscript{27} ANT can thereby be used for conducting theory-generative research in IR which focuses on the role of technical objects in international politics, by illuminating ‘the significance of nonhumans’ in political networks as well as ‘the critical importance of scientific and technical knowledge to international relations.’\textsuperscript{28} ANT, therefore, is particularly suitable for a research design seeking to empirically investigate the impact of ‘smart border’ technologies in shaping the EU border security agenda since 2001.

Central to ANT-inspired research is tracing the network associations between human and nonhuman actors and examining their transformation through time as the result of political contingency and contestation. The central aim of this thesis is to make causal claims relating to the relative importance of particular actors within socially and historically specific networks. The situatedness of this research, and its focus on the ascendancy of ‘smart border’ technologies in the EU, calls for a process tracing research design if such claims are to be convincing. Process tracing refers to ‘drawing descriptive and causal inferences from diagnostic pieces of evidence.’\textsuperscript{29} Moreover, process tracing relies on temporal sequencing, that is, empirically establishing that \textit{i)} ‘a specific event or process took place,’ \textit{ii)} ‘a different event or process occurred after the initial event or process,’ and \textit{iii)} ‘the former was the cause of the latter.’\textsuperscript{30} Central to process tracing research is ‘careful description’ of qualitative evidence: ‘process tracing inherently analyzes trajectories of

\textsuperscript{25} Law (2009: 417).
\textsuperscript{26} Sayes (2014: 141).
\textsuperscript{27} Mutlu (2013: 173).
\textsuperscript{28} Barry (2013: 420).
\textsuperscript{29} Collier (2011: 824).
\textsuperscript{30} Mahoney (2012: 571). Original emphasis.
change and causation, but such analysis fails if the phenomena observed at each step in this trajectory are not adequately described.31

To allow for evidence-based description, this research deployed document analysis and elite interviews for data collection purposes. Document analysis refers to the systematic examination and evaluation of documents containing ‘text (words) and images that have been recorded without a researcher’s intervention.’32 These documents are analyzed in order to provide background information for the research, suggest questions for further research and potential interviews, provide direct insights into the object of research, trace change and development through time, and corroborate findings based on other sources of evidence.33 I have analyzed approximately 4,000 pages of: EU law; other official EU documents such as Council Conclusions as well as Communications and Proposals by the Commission; technical reports, impact assessments, and formal opinions by the Commission and Parliament, as well as independent EU-affiliated bodies such as the European Data Protection Supervisor and the European Union Agency for Fundamental Rights; and technical reports and policy briefs by private security corporations and non-profit organizations.

In addition to document analysis, empirical evidence was collected through semi-structured elite interviews. Semi-structured qualitative interviews are ‘organized around a set of predetermined open-ended questions, with other questions emerging from the dialogue between interviewer and interviewee.’34 I conducted such interviews, ranging from 45 minutes to 90 minutes in length, with 21 EU officials from the European Commission, the European Parliament, and the European Data Protection Supervisor, as well as 6 executive-level employees of private security companies providing technologies deployed at the EU external border. The interviewees are categorized as ‘elites’ due to their ‘important social networks, social capital and strategic positions’ within the

33 Ibid.: 29-30.
field of EU border security. Elite interviews are utilized to ‘delve deeply into social and personal matters,’ to triangulate data collected from other sources, and to trace actor networks as interview subjects offer their insights into the networks in which they are situated as well as the roles and importance of other actors. Elite interviews are particularly useful in the context of researching topics relating to security policy, where the formal administrative processes of policymaking may differ quite substantially from the substantive causes and effects of those policies, which elite actors are able to illuminate. In addition to these semi-structured interviews, I attended an industry fair for security professionals in London, during which I was able to observe from the inside a key site ‘where ideas and discourses are shared among border security professionals.’

Case Selection

This research focuses on developments relating to the external borders of the European Union from late 2001 to early 2019. The case was selected for reasons of political relevance and importance, empirical access, and the identification of a research gap which could productively be addressed within the spatial and temporal limitations of an MPhil thesis.

The EU is a ‘unique but important’ case due to the extent to which migration has been politicized therein, thus ensuring the political and policy relevance of this thesis. While migration control has been hotly contested in the United States as well, its politicization there has not matched the EU. Abolishing internal borders within the Schengen zone has been hailed as one of the most important achievements of the European integration project, and following the ‘refugee crisis’ of 2014-2015, migration has been a crucial factor shaping the rise of Eurosceptic parties across the continent and significantly influencing historical decisions such as the Brexit

38 Davies (2001: 74).
40 Salter (2013: 16).
referendum. Even in late 2018, three years since the peak of the so-called ‘refugee crisis,’ migration was still ranked by the EU public as the most important political challenge for the Union.\footnote{European Commission (2018b: 12).} This is in sharp contrast to the United States, where in early 2019 the public ranked migration only the ninth most important political issue, with the economy, health care costs, and education seen as the three most important challenges.\footnote{Pew Research Center (2019).}

For the purposes of empirical research, the European Union was more geographically, linguistically, and politically accessible than alternative cases such as the United States or China. The elite interviews conducted with EU officials in Brussels gave rise to empirical findings crucial to this research; conducting similar interviews in the aforementioned alternative locations would not have been possible due to financial or linguistic barriers. Moreover, the technologization of EU borders is a research topic which has been sufficiently researched to provide a strong academic basis for this research, yet to which it is still possible to productively contribute within the scope of an MPhil-length study.

\textit{Limitations}

While a process tracing research design utilizing document analysis and elite interviews provides the most promising methodological framework for this research, it is worth noting some main limitations arising from its scope and research methods.

As mentioned above, the aim here is not to generate generalizable theoretical predictions beyond the EU, applicable to all cases of technological development in a border management context. Of course, this is not to say that the findings in this research are wholly irrelevant to other contexts, and indeed the aim is nonetheless to generate theoretical insights into the causal role of technologies in the context of border security policy. Furthermore, the low external validity of this study is offset by its high internal validity, identification of causal mechanisms beyond the scope
of large-N studies, attentiveness to ‘complex relationships such as path dependence and multiple interaction effects,’ and the ability to generate novel theoretical propositions regarding the development of security technologies at the EU external border.43

The qualitative and interpretive nature of the research will necessarily expose it to criticisms of subjectivity. However, all research, including quantitative studies, are the product of subjective engagement and interpretation. Questions regarding what and how to measure, what to look for, and how to interpret findings are all heavily value-laden.44 Of course, one might argue that although quantitative research findings are also subjective, at least they are open to scrutiny by others with access to the data. As the research design adopted here cannot be judged against a standard of replicability, I have followed best practices of critical qualitative research by ensuring legibility, clarity, and transparency.45 With this in mind, I have relied as much as possible on direct quotations from documents and interviews, so that readers may make their own judgements regarding the validity of my interpretations. Anonymized interview identifiers are provided in footnotes, to indicate which quotes come from the same interviews. Moreover, I have used multiple sources to corroborate my findings, and although I would not characterize this research as positivist, it is most certainly empiricist in that it is firmly based on the collection and interpretation of empirical evidence.46

Academic Contribution

This thesis makes three key contributions to the academic study of International Relations. First, existing traditional security studies scholarship tends to focus on Member States when discussing EU security policies, while critical accounts often focus on security practitioners, such as border guards and the police. This has left the role of EU institutions themselves underexamined. My

43 Bennett (2004: 19).
45 Salter (2013).
46 For a discussion of the relationship between positivism and empiricism, see Neal (2013).
contribution has been to address this gap by focusing on the role of the EU institutions, in particular the European Commission, in the securitization of migration in the EU.

Second, I develop a novel empirical account of the causal mechanisms explaining the ascendancy and proliferation of ‘smart borders’ in the EU. While existing traditional security studies literature has left unexamined the particular technical solutions used for border control purposes in favor of macro-level explanations of security policies, existing critical scholarship has often taken as an ‘empirical starting point’ the ‘rapidly evolving network of EU surveillance practices’ and then elucidated their theoretical and normative implications.\(^{47}\) I contribute to this body of research by providing an empirically substantiated account of the causal mechanisms which have given rise to these technologies and ensured their proliferation.

The third contribution is theoretical. Despite recent calls by IR scholars to theorize how novel information technologies might impact traditional understandings of IR,\(^ {48}\) research in this area is still lacking. This thesis synthesizes insights from Critical Security Studies, ANT, and Science & Technology Studies to construct a theory-generative account of the independent impacts of technological systems in IR. It substantiates these theoretical claims by empirically demonstrating the role of technical imperatives in the proliferation of ‘smart borders.’ Making sense of these independent effects is crucial to achieving a better understanding of the causes and consequences of security policies in the twenty-first century.

**Structure of the Thesis**

This introductory chapter is followed by four substantive chapters and a conclusion. Chapter 1 first reviews the existing IR literature on the securitization of migration and technology in global affairs, situating the thesis within existing scholarly debates. This paves the way for an explication of the theoretical framework of this research. Chapters 2-4 tackle the three subquestions guiding

\(^{47}\) Aas (2011: 332).

\(^{48}\) See e.g. Kello (2017); Longo (2018).
this research. Chapter 2 examines how and why migration has become securitized in the EU. Chapters 3 and 4 explain the choice between alternative tools for border management in the EU and assess the intended and unintended effects of these novel technical tools. Chapter 3 outlines and critiques the traditional account of security policy formation in the context of EU border controls, and Chapter 4 thereafter constructs an alternative model better able to explain the ascendancy and proliferation of ‘smart borders’ in the EU, thus answering the main research question of this thesis. Finally, the conclusion highlights how these findings relate to existing scholarship, explicates the theoretical and empirical contributions of the thesis, outlines some normative implications, and provides concluding remarks.
Chapter 1 – Literature Review and Theoretical Framework

A critique does not consist in saying that things aren’t good the way they are. It consists in seeing on what type of assumptions, of familiar notions, of established, unexamined ways of thinking the accepted practices are based.

– Michel Foucault, 1981

The first of the three subquestions guiding this research relates to the concept of ‘security’ in International Relations (IR), and more precisely to the processes of securitization, that is, how security threats become identified as such. This chapter therefore begins with an overview of the strengths and shortcomings of existing IR scholarship on securitization, particularly in the context of migration, which within IR has often been conceptualized as a national security issue. Thereafter, the second section examines existing literature on the role of technology in international affairs, laying the basis for assessing the latter two subquestions. The literature review is followed by an outline of the theoretical framework of this thesis.

Security, Migration, Securitization

In IR, ‘security matters,’ yet questions regarding how and why certain issues become identified as security threats, and how we should study such questions, remain contested. For Hans Morgenthau, ‘psychological factors’ resulting in a quest for security constituted ‘the motive force and the actual need’ driving aggressive foreign policies and increases in armaments. John Herz and Robert Jervis more thoroughly examined the dynamics of mutual distrust and fear leading to the ‘security dilemma.’ For them, this dilemma arises among states operating under conditions of anarchy, wherein ‘the lack of an international sovereign’ leads to cycles of security competition and

1 Foucault (2002: 456).
2 Williams (2008: 1).
3 Morgenthau (1948: 331).
4 Herz (1950).
arms races as 'one state’s gain in security often inadvertently threatens others.' Security retained its central importance even as realist analyses of IR shifted away from examining psychological and domestic factors, and began focusing on the structural, systemic level of analysis. In his seminal Theory of International Politics, Kenneth Waltz would thereby state that ‘in anarchy, security is the highest end.’

Nonetheless, despite being awarded such central importance within IR since its inception as an academic discipline following the First World War, rarely was the meaning of security explicitly defined, or its scope delimited. Some attempts were made at conceptual analyses of security, notably Arnold Wolfers’s 1952 essay ‘Security as an Ambiguous Symbol,’ yet such interventions failed to stimulate much reflection on the precise meaning of security until recent decades. Implicitly, however, security nearly always referred to the protection of the state against military threats. Stephen Walt made explicit this traditional view by characterizing security studies as ‘the study of the threat, use, and control of military force.’

From this traditionalist perspective, the securitization of migration in the twenty-first century is explained as a response by states to objectively identifiable security threats arising from increased migration in an era of globalization. The argument is that intensified transnational mobility has given rise to ‘clandestine transnational actors,’ able to operate seamlessly across state borders. The main strength of such scholarship is that it highlights the enduring linkages between state sovereignty and control over borders, as increased migration flows seem to challenge ‘notions of the territorial state as a bounded entity with a clearly demarcated territory and population.’ When seeking to answer the question of how and why migration has become securitized in the

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6 Waltz (1979: 126).
7 For a history of the development of the discipline, see Knutsen (1992).
8 Wolfers (1952).
11 Andreas (2003: 78).
EU, concerns regarding sovereign authority are likely to figure prominently in the discussion, particularly due to the unique interplay of national and supranational authority that characterizes the EU governance structure.\textsuperscript{13}

Yet control over the legitimate means of movement does not necessarily imply countering violent threats. Thus, traditionalist scholarship further elaborates that migrants do not simply represent a challenge to sovereign authority, but also a violent threat to the internal security and stability of states, arising from potential ‘attack[s] by armed refugees’ and other migrants.\textsuperscript{14} As we have seen above, however, the magnitude of the ‘armed refugee’ threat is empirically contestable. Traditionalist authors have themselves recognized the difficulty of differentiating between ‘real’ and ‘perceived’ threats,\textsuperscript{15} and have noted that ‘one danger in making the link between migration and security with regard to international terrorism is that states may overreact.’\textsuperscript{16} This indicates that the relationship between security threat and state response is neither obvious nor straightforward. Indeed, Chapter 3 demonstrates that contrary to the predictions of the traditional security studies approach, empirical evidence of migration-related threats or the suitability of ‘smart borders’ to respond to these threats is severely lacking. This suggests we need an analytical framework better able to grasp how particular issues become regarded as threatening in the first place.

In response to the reification of military problematics and state-centricity, critical scholars have sought to challenge the underlying ontological assumptions of traditional security studies by arguing that security is socially constructed. A highly influential account was developed by the Copenhagen School of critical security studies, which conceptualized security as a ‘speech act,’ meaning that ‘security is not of interest as a sign that refers to something more real; the utterance itself is the act.’\textsuperscript{17} From this perspective, threats to security are not objectively given. Rather, issue

\textsuperscript{13} White (2015).
\textsuperscript{14} Weiner (1992/1993: 103).
\textsuperscript{15} Ibid.: 104.
\textsuperscript{17} Wæver (1995: 55). Original emphasis.
areas are ‘securitized’ by discursively framing a particular issue as an urgent, existential threat to a referent object—usually the state or the nation—in an attempt to legitimize exceptional actions beyond the democratic and legal ‘rules that would otherwise bind.’ Later contributions to the Copenhagen School literature have refined this framework in two ways. Firstly, in response to criticisms that this view of securitization leads to a narrow focus on speeches by political elites, Mike Williams highlighted the securitizing potential of other media such as images. Second, Thierry Balzacq has stressed that securitization is an intersubjective process, the success or failure of which depends on its acceptance by the intended audience.

This scholarship provides tools for understanding when and how migration has been moved onto the security agenda in Europe. Has migration been discursively linked to existential threats in public speeches and policy proposals? Since when? What is the purported nature of the threats arising from migration, and what exactly do they threaten? Have these discursive acts been followed up by measures beyond the legal rules that would otherwise restrict security policies?

However, further critical research has pointed to the shortcomings of focusing on highly visible elite discourses and moments of exception. Scholars from the Paris School of critical security studies have pointed out that even in the absence of elite ‘speech acts,’ topics such as migration can become securitized through long-term, mundane, and diffuse political processes. Drawing on the sociological work of Pierre Bourdieu, Didier Bigo conceptualized security as a ‘field’ in which security professionals are able to claim ‘expertise,’ that is, to ‘construct problems in a way that enables them to use their traditional “solutions.”’ Jef Huysmans characterized the securitization of migration in the European Union as the result of long-term bureaucratic, 

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18 Buzan et al. (1998: 5).
19 Williams (2003).
institutional, and legal developments linked to deepening European integration, through which migration became slowly—and firmly—embedded within the security agenda.\textsuperscript{22}

Two key insights from the Paris School are particularly relevant to the ascendancy of ‘smart borders’ in the EU. The first is that securitization happens not only through existential speech acts, but also through less visible and more mundane acts of appropriating particular issues onto the security agenda by professionals of the field. This highlights the importance of analyzing policy documents, legal texts, and technical papers, which have been much less visibly politicized than elite discourses. The second important insight is the initially enigmatic proposition that ‘security is not the opposite of insecurity.’\textsuperscript{23} More clearly stated, this means that a lack of violent security practices does not indicate a lack of securitization; even practices such as ‘reassuring discourses or different techniques of protection (e.g. video cameras),’ do not necessarily increase feelings of security or trust in democratic political processes.\textsuperscript{24} In the context of novel border control technologies, this implies that the securitization of migration might be reflected not only in a proliferation of security practices and tools which are clearly exclusionary or violent, such as weapons systems or border fences, but also in less visible or seemingly neutral tools nonetheless contributing to feelings of insecurity and unease rather than safety and trust.

Although the Copenhagen and Paris Schools provide useful analytical tools for analyzing the securitization of migration, a crucial shortcoming—especially important given the focus of this research on ‘smart borders’—is their relative silence on the role of materiality in shaping the security agenda. An expanding body of ‘new materialist’ critical security literature draws on insights from fields such as Sociology and Science and Technology Studies (STS) to argue that although security is indeed socially constructed, material objects and technologies such as high-tech surveillance systems and weapons, as well as low-tech objects such as paper files and fences, have a profound

\textsuperscript{22} Huysmans (2006).
\textsuperscript{24} Ibid.
independent effect on security practices.\textsuperscript{25} Nonhuman objects shape the security agenda by providing the material conditions of possibility for security practices, and by exerting a causal impact of their own, for instance by stabilizing discourses, legitimizing certain practices while delegitimizing others, and shaping understandings of what constitutes a security issue.\textsuperscript{26} In this view, security is neither an objective condition determined by exogenous material factors, nor is it an intersubjective social construct entirely free from material conditions. Rather, subjectivity and materiality combine as material objects ‘fundamentally alter the condition of human possibility in ways that are unpredictable and irreducible to their constituent elements.’\textsuperscript{27} We should therefore not assume \textit{a priori} the analytical primacy of either material or social factors, but establish their relative importance through empirical investigation. This raises the question of how large-scale information systems themselves might have affected the securitization of migration. As we shall see below, answering this question is crucial to understanding the proliferation of ‘smart borders.’

It is worth noting briefly that migration has not only figured as a national security issue in IR scholarship. IR scholars have sought to understand the underlying causes of migratory movements, such as conflicts resulting in forced displacement and economic inequalities due to which emigration becomes seen as a path to higher wages.\textsuperscript{28} These causes have been linked to questions of how migration relates to territorial sovereignty, and to what extent opportunities for migration shift power from states to individuals.\textsuperscript{29} Nonetheless, much migration-related IR scholarship remains motivated by the assertion that ‘international population movements can have a dramatic effect on the security and sovereignty of states.’\textsuperscript{30} In this context, this thesis is concerned with explaining how and why migration has become understood as a potential security issue, and explaining the particular policy responses to such perceived security threats. The underlying causes

\textsuperscript{25} Amicelle et al. (2016)
\textsuperscript{26} Jeandesboz (2016: 294-295).
\textsuperscript{27} Salter (2015: viii).
\textsuperscript{28} Betts (2009); Sassen (1996).
\textsuperscript{29} Rosenau (1990); Ruggie (1998).
\textsuperscript{30} Hollifield (2012: 350).
of migration, or broader international policy responses thereto, are beyond the scope of such an endeavor.

This thesis, rather, assesses the relative merits of traditional and critical perspectives on security policies through an in-depth analysis of EU ‘smart borders.’ Taking seriously both materiality and subjectivity, this research takes up the challenge recently posed by critics of critical securitization theory to follow up on theoretical postulations through in-depth empirical substantiation.\(^\text{31}\) In order to answer the latter two subquestions, concerning how particular security technologies become chosen over others, and what intended and unintended effects they might have, this thesis draws upon existing scholarship on technology in global affairs.

**The Politics of Technology**

In the context of ‘the growth of large-scale capitalism and industrialism’ as well as ‘the improvement of means of communication and the technical instruments of power,’ E.H. Carr concluded in 1939 that technological development was ‘likely to be more decisive than any other [factor] for the course of world history in the next few generations.’\(^\text{32}\) More recently, Robert Keohane and Joseph Nye have argued that the transnationalization of economic production and development of global telecommunications technologies have ushered in an era of ‘complex interdependence’ in which interconnections between states and societies are so dense they decrease the importance of military force.\(^\text{33}\) Similarly, Barry Buzan and Richard Little have argued that such technological developments have contributed to the expansion of ‘interaction capacity’ in the international system.\(^\text{34}\) Technological developments have also been crucial to the study of strategic and military affairs, with the atomic bomb seen as a particularly significant innovation by prominent

\(^{31}\) Messina (2014).


\(^{34}\) Buzan & Little (1994).
scholars including Raymond Aron, John Herz, and Kenneth Waltz.\textsuperscript{35} Aside from nuclear weapons, topics such as the offense-defense balance have included technological development as an important causal variable,\textsuperscript{36} and much scholarship has focused on the military implications of particular technologies, such as drones or cyberwarfare weapons.\textsuperscript{37}

Perhaps surprisingly, however—despite the salience of technologies as causal variables—the range of perspectives from which the nature of technological development has been understood in IR is in fact quite narrow. Nearly all fall under one of two general headings: essentialism and instrumentalism. The offense-defense balance debate is illustrative in this regard: a main point of contestation has been whether new technologies determine state actions by tilting the offense-defense balance, as suggested by proponents of the theory, or if technologies themselves are neutral, and therefore state behavior depends on how they are perceived in a particular sociopolitical context, as argued by critics.\textsuperscript{38} The former position can be characterized as essentialist; the latter is instrumentalist. These two perspectives have been the most dominant ways of conceptualizing technology in IR thus far, and in fact both provide valuable insights for examining the ascendency and proliferation of ‘smart borders’ in the EU.

Essentialism posits, first, that technological development proceeds along a ‘general line of development that reflects the autonomous logic of discovery,’ and, second, that ‘social organization must adapt to technical progress at each stage of development according to the “imperative” requirements of technology.’\textsuperscript{39} In other words, essentialism asserts that technological development results ‘from the activities of inventors, engineers, and designers following an internal, technical logic that has nothing to do with social relationships,’ and that ‘technological change causes or determines social change.’\textsuperscript{40} Essentialism is reflected in the arguments of proponents of offense-

\textsuperscript{35} Aron (1966); Herz (1959); Waltz (1990).
\textsuperscript{36} Van Evera (1998).
\textsuperscript{37} See e.g. Horowitz et al. (2016); Kello (2017).
\textsuperscript{38} For an overview of offense-defense balance theory and prominent criticisms thereof, see Lynn-Jones (1995).
\textsuperscript{39} McCarthy (2017a: 8).
\textsuperscript{40} Wyatt (2008: 168).
defense balance theory, who argue that the inherent characteristics of new military technologies require states to act either more or less aggressively, as well as in the work of globalization theorists who argue that new digital technologies, arising from a linear path of scientific discovery, create pressures which states will either acknowledge and react to accordingly, or ignore at their peril.\textsuperscript{41} For instance, Randall Schweller assumes that ‘the accelerated pace of technological change’ is an exogenous variable which causes shifts in the global balance of power, and to which states must respond by correctly predicting ‘what is the trajectory of future technologies’ and preparing accordingly.\textsuperscript{42} In other words, there is one true linear path of technological development, which states either successfully decipher or misjudge, and on this basis either prosper or decay.

The main strength of the essentialist position is its recognition that material artefacts, including security technologies, are biased towards certain behaviors and social understandings. A powerful example of technologies shaping political imaginaries is the development of cartographic technologies and their impact on notions of sovereignty. In his insightful study of mapmaking practices, Jordan Branch showed that the development of cartographic technologies, which represented political authority as two-dimensional linear space on maps, preceded the establishment of linear territorial sovereignty by centuries. Branch shows that the practice of demarcating linear boundaries—inspired by two-dimensional maps produced for commercial rather than governing purposes, and which were rooted in the 16\textsuperscript{th} century rediscovery of Ptolemy’s \textit{Geography} from the second century AD—was first deployed in the New World, where it allowed imperial powers to claim exclusive political authority over unfamiliar geographical areas, and was only later ‘reflected’ back into Europe.\textsuperscript{43} Remarkably, mapmaking technologies and scientific discourses ultimately shaped conceptions of legitimate political authority, rather than these technologies and practices being developed to support prior theoretical formulations.

\textsuperscript{41} See e.g. Drezner (2010).
\textsuperscript{42} Schweller (2014: xi, 116).
\textsuperscript{43} Branch (2013).
This insight is significant when seeking to uncover the intended and unintended effects of security technologies. The essentialist perspective suggests that despite the supposed flexibility of ‘smart border’ technologies, these systems are likely to carry with them biases that will limit the scope of their conceivable aims. Indeed, as demonstrated in Chapter 4, the large-scale information systems deployed at the EU external border privilege a securitized understanding of migration over alternative framings, and moreover are biased towards ever-increasing surveillance at the expense of fundamental rights to private life and data protection.

Instrumentalism, however, rejects the material determinism of the essentialists, by arguing that technologies are essentially neutral. While technologies can intensify or reinforce existing international political dynamics through what Herz calls the ‘acceleration of social speed,’ ultimately technologies remain ‘a passive, neutral, and exogenous instrument’ which human actors utilize for existing political ends. This instrumentalist perspective is deployed by scholars stressing the socially constructed nature of reality, including John Ruggie who argues that the adoption of new technologies is a ‘social choice’ depending on values, perceptions, and political power. For Alexander Wendt, although ‘brute material forces have some effects on the constitution of power and interest,’ their impact ultimately depends ‘what actors want and believe’ as technological artefacts are deployed by ‘purposeful agents’ pursuing socially constructed goals. Similarly, James Rosenau suggests that technologies ‘do not themselves tilt in the direction of any particular values […] They are, rather, neutral, in the sense that their tilt is provided by people.’ A popular example of instrumentalist argumentation is the United States National Rifle Association’s slogan ‘guns don’t kill people, people kill people.’ The instrumentalist insight is relevant for assessing the

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44 Herz (1976).
45 Fritsch (2011: 36).
46 Quoted in Fritsch (2011: 38)
49 Downie (2018).
effects of ‘smart border’ technologies in the EU, as it suggests we must look further than their technical design in order to uncover the ends to which they are put by human actors.

However, critics of instrumentalism have argued that this perspective goes too far in privileging the social over the material, to the extent that the material world seems to be wholly irrelevant to political analyses. This criticism is illustrated by the response to the above NRA slogan by gun control proponents in the United States, who argue that while people must operate a gun in order to unlock its lethal potential, guns are manufactured for the specific purpose of killing or harming; the ends to which guns can be deployed are not infinite.\(^{50}\) It becomes clear that both essentialism and instrumentalism provide us with some analytical tools to investigate the proliferation of ‘smart borders’ in the EU, and that we should be attentive to the interplay between technical bias and human choice in the analysis below. Indeed, Chapter 4 demonstrates how technical imperatives create a bias towards the proliferation of ‘smart border’ technologies, yet these technical imperatives have also been acted upon by the European Commission within the policymaking process.

Unfortunately, neither the essentialist nor the instrumentalist position has much to say on the second subquestion guiding this research, namely what determines the choice to develop particular security technologies, rather than possible alternatives, to tackle migration-related security issues. While it would in theory be possible for instrumentalist analyses to examine the politics of technological development, in practice instrumentalists such as Rosenau and Singh focus on how new technologies are utilized by actors in the international system once they have already been developed. They argue relentlessly that ‘technology does not determine politics,’ yet politics determining technological development is left entirely unexplored.\(^{51}\) Both essentialism and instrumentalism assume that novel security technologies are adopted because they are technically superior to previous security tools in tackling identified threats. As we have seen in the introduction

\(^{50}\) Johnson (2013).
\(^{51}\) Singh (2002: 17).
to this thesis, however, not only is the usefulness of large-scale information systems contestable—not to mention the question of how ‘superiority’ should even be measured—but so too is the particular nature of migration-related security threats. No straightforward relationship between identified threats and technical solutions exists. What is needed, then, is to supplement these perspectives with a framework better able to interrogate the politics of technological development.

Not unlike recent ‘new materialist’ turn in critical security studies, outlined above, recent IR scholarship on technology has also argued that the dichotomy between materiality and ideas must be overcome. To this end, scholars such as Geoffrey Herrera and Stefan Fritsch, seeking a new ‘middle way’ between essentialism and instrumentalism, have drawn on two central concepts developed by historian of technology Thomas P. Hughes: i) the sociotechnical system and ii) technological momentum.\(^{52}\) Sociotechnical systems are ‘the mix of material and social institutions that cohere around artifacts,’ a framing which, for instance, would broaden our understanding of nuclear weapons to include ‘the explosive device and the delivery vehicle, and also the command and control system, early-warning detection systems, arms control efforts, nuclear strategy, and so on.’\(^{53}\) The concept of technological momentum, in turn, adds a temporal dimension to the effects of technology, by highlighting how sociotechnical systems become increasingly impactful as they increase in complexity and maturity.\(^{54}\) Conceptualizing technologies as sociotechnical systems, which gather technological momentum through time, allows for combining essentialist and instrumentalist insights without having to treat technological development as exogenous to politics.

These two concepts are further elaborated in the next section. Taken together, they provide the missing analytical tools for assessing the second subquestion of this research, while simultaneously complementing the essentialist and instrumentalist perspectives in answering the third subquestion. A central task for Chapters 3 and 4, therefore, is to specify the relative

\(^{52}\) Hughes (1969, 1983).


\(^{54}\) Fritsch (2011: 33).
importance of and relationship between \( i \) mechanisms highlighted by the concept of sociotechnical systems, such as political contestation or the social and political biases of human actors, and \( ii \) mechanisms relating to technological momentum, such as technical imperatives, sunk costs, and social barriers when explaining the ascendancy and proliferation of ‘smart borders’ in the EU.

**Theoretical Framework**

This section synthesizes the insights of the new materialist turn in critical security studies and the recent middle way between technological essentialism and instrumentalism, in order to construct a theoretical framework which will inform the substantive analysis in subsequent chapters.

*Securitizing Migration: Mechanisms and Motives*

A key insight adopted from the existing literature on securitization is that no clear threat-response dynamic exists between objectively identifiable security problems and obvious responses thereto. Importantly, this insight is not relevant only when the existence or magnitude of a security threat is contestable, as often is the case. It also highlights how, even when agreement exists regarding the identification of the threat, the response thereto will always be the product of the contested and contingent politics of security. When explaining the ascendancy and proliferation of ‘smart borders,’ we must therefore not only explain when and why migration became securitized in Europe, but also how migration became constructed as a threat to the European Union as a whole. This point is crucial, in that even if there had been incontrovertible proof of the dangerousness of migration to European states in the 1980s and 1990s, there would remain the question of why and how *EU institutions* were seen as the appropriate actors to respond to such threats rather than the Member States, which up until the late 1990s had closely guarded their national sovereignty.

The existing literature on securitization provides us with a set of theoretical predictions regarding the securitization of migration in Europe. First, the Copenhagen School of critical security studies highlighted how issues might become identified as security threats once a
securitizing actor (usually political elites) discursively frame them as such. In line with this conception, we expect that European political discourse in the 1980s and 1990s would have very visibly framed migration as a security threat. Evidence of discursive securitizations from this period does exist, yet we shall also see that the EU did not figure prominently as the referent object—that which is to be secured—of securitizing discourses until after migration had become moved onto the EU security agenda by the late 1990s.

Second, the Paris School of security studies suggested that the securitization of migration in Europe was the product of diffuse institutional mechanisms over a period of decades. We thus expect to find evidence of institutional contestation and cooperation between EU-level, national-level, and transnational actors working in the field of migration and security, which ultimately resulted in the institutional victory of actors privileging a securitized understanding of migration. Indeed, the main findings of Chapter 2 are in accordance with this account: the basis for securitizing migration in Europe was laid through informal institutional cooperation between Member States in the 1970s and 1980s, and between 1992-1997 the European Commission reconceptualized migration from a mainly economic issue into a specifically EU-level security issue in the midst of contingent political contestation.

Third, the recent ‘new materialist’ turn in critical security studies suggested border security tools can be conceptualized as securitization tools, that is, technical systems ‘embodying a specific threat image through which public action is configured in order to address a security issue.’ Simply put, securitization tools are technologies which socially construct their objects as security threats, and embody a particular view regarding what ought to be done in response to these threats. For instance, Balzacq and Léonard argue that the Visa Information System (VIS), which the EU has used for processing Schengen visa applications since 2011, is a securitization tool: ‘By emphasizing

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that sharing information on visas can contribute to combating terrorism and serious crime, the VIS strongly suggests that Schengen visa holders are potential threats to the EU. [...] The rules defining access to its data socially construct Schengen visa holders as potential security hazards to Schengen states.\textsuperscript{58} We thus expect to find evidence of the establishment of novel technical tools to address migration-related security threats at the EU level, which subsequently contribute to the further entrenchment of this security framing. Indeed, the establishment of the Integrated Border Management agenda by the European Commission in 2002 is consistent with this prediction, and as we shall see in Chapters 3 and 4, has been instrumental to the further proliferation of EU-level border security tools between 2001-2019.

Yet what is missing from existing accounts of securitization is an account of why exactly institutional actors might seek to securitize migration. Most critical security studies literature on the securitization of migration in Europe has focused on how migration has been securitized, what evidence exists of discursive, institutional, or material securitizations, and what the effects of securitization have been.\textsuperscript{59} Of course, such work has been immensely valuable and important particularly in highlighting the empirical and normative shortcomings of traditional security studies scholarship.\textsuperscript{60} However, what has been touched upon less often is the question of why exactly particular issues become securitized, if not due to their inherent dangerousness.\textsuperscript{61} This is the result of the explicit choice to make ‘the practice of securitization [...] the center of analysis.’\textsuperscript{62}

Institutionalist literature focusing on the EU provides some analytical tools for constructing such an explanation. The insights most relevant to the analysis here are twofold. First, institutionalism asserts that supranational organizations such as the EU institutions act as

\begin{itemize}
  \item \textsuperscript{58} Ibid.
  \item \textsuperscript{59} See e.g. Huysmans (2000); Kostakopoulou (2009); Lazaridis (2011).
  \item \textsuperscript{60} For an overview, see Messina (2014).
  \item \textsuperscript{61} An important exception is Didier Bigo’s work, where he argues that the securitization of migration is promoted by a field of security experts and politicians, in whose professional self-interest it is to securitize migration in order to expand their responsibilities and competences. See Bigo (2002); Also, for an account of power competition among political actors within the EU in the 1990s, see Guiraudon (2000).
  \item \textsuperscript{62} Buzan et al. (1998: 32).
\end{itemize}
‘competence maximizers,’ that is, they ‘seek to increase both their own competences and more generally the competences of the [European Union].’\textsuperscript{63} Second, although constrained by the principal-agent relationship between the Member States and the EU bodies, these supranational organizations are nonetheless also able to pursue their autonomous interests, and can therefore ‘exert an independent causal influence on policy outcomes.’\textsuperscript{64} Factors such as agenda-setting and regulatory powers provide EU institutions with autonomous influence, further strengthened by the short time horizons of Member State politicians and the institutional complexity of the EU.\textsuperscript{65} These two insights provide us with further predictions of the securitization process in Europe: \textit{i}) we expect that the main actors responsible for the securitization of migration on a European level were EU-level actors; \textit{ii}) we expect that their securitization attempts were linked to a broader agenda of promoting EU integration; and \textit{iii}) we expect that these actors have had an independent influence on moving migration onto the EU security agenda.

\textit{Securitization in Time: Critical Junctures and Path Dependence}

Existing analyses of securitization also tend to overlook the importance of \textit{time} for processes of securitization. This is an issue particularly for Copenhagen School analyses, for which securitizations begin at the rhetorical utterance of security, and the importance of contextual factors legitimizing or delegitimizing such discourses are often left underexamined.\textsuperscript{66} A temporal dimension often implicitly underlies Paris School accounts of institutional processes of securitization, yet the mechanisms through which time exerts a causal impact on securitization remain undertheorized. In order to correct this shortcoming, two concepts are used in Chapter 2 highlight the importance of time in politics: \textit{critical junctures} and \textit{path dependence}.

\textsuperscript{63} Pollack (1998: 219).
\textsuperscript{64} Ibid.: 220.
\textsuperscript{65} Pierson (1998: 34-40).
\textsuperscript{66} For a corrective to this view, see Balzacq (2005).
The notion of a critical juncture refers to a ‘relatively short period of time during which there is a substantially heightened probability that agents’ choices will affect the outcome of interest.’ More specifically, the length of the critical juncture should be brief in relation to the length of the process to which it gives rise, and the probability of agents’ choices affecting outcomes should be high relative to that probability before or after the critical juncture. Critical junctures are highly contingent historical moments in which the range of plausible policy choices for political actors ‘expands substantially and the consequences of their actions for the outcome of interest are potentially much more momentous.’ This notion is deployed in Chapter 2 to describe the period between the Maastricht Treaty of 1992 and the Amsterdam Treaty of 1997.

Path dependence arises from ‘positive feedback processes’ through which each step down a particular path of policymaking makes it increasingly difficult to change course and reconceptualize the policy issue, as ‘the costs of switching to some previously plausible alternative rise.’ In order to convincingly argue that a stable policy arrangement has been the product of path dependence, we must ‘identify the mechanisms of reproduction at work […] Among other things, we need to know exactly who is invested in particular institutional arrangements, exactly how that investment is sustained over time, and perhaps how those who are not invested in the institutions are kept out.’ In the case of the securitization of migration in the EU, path dependence is the result of the Commission’s consistent attempts at competence maximization and legitimization, supported by institutional mechanisms such as issue density and the high barriers to institutional redesign at the EU level, familiar to scholars of the EU. Path dependence highlights how, following the critical juncture between 1992-1997, a securitized understanding of migration control at the EU level has become ‘locked in.’ This is not to say that the continued securitization of

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68 Ibid.: 343.
70 Thelen (1999: 391). Original emphasis.
migration in the EU in the post-Amsterdam period has been inevitable, or that it will under no circumstances change in the future. Rather, the claim is simply that the ‘size of change needed to generate the different outcome,’ that is, desecuritizing migration, has been significantly larger since the closure of the critical juncture in 1997 and continues to grow. In other words, as a result of more than two decades of path dependence, actors seeking to promote alternative conceptualizations of migration at an EU level now face considerable institutional, legal, technical, and ideational friction relative to security-oriented proposals.

Sociotechnical Systems and Technological Momentum

While the above insights will be used to make sense of the securitization of migration in the EU in Chapter 2, the concepts of sociotechnical systems and technological momentum, briefly mentioned above, are utilized to explain the ascendancy and proliferation of ‘smart borders’ in Chapters 3 and 4.

The notion of the sociotechnical system highlights the role of human agency in developing and deploying technologies. A classic example of the politics of technical design is the case of New York City Planning Commissioner Robert Moses, who deliberately designed unusually low overpasses on Long Island in order to prevent low-income groups and ethnic minorities—who relied on public buses too high to fit under the overpasses—from accessing certain public areas such as Jones Beach, thereby privileging the predominantly white car-owning upper and middle classes.72 Conceptualizing technologies more specifically as sociotechnical systems is useful for interrogating whether the development of ‘smart borders’ might similarly have been influenced by the social and political biases of its developers, although it need not imply a racial or clearly intentional bias akin to that of Robert Moses. This reintroduces dynamics of power, so central to the study of IR since its inception, into this research: ‘it is not that technology develops outside of human agency, but that it develops outside of some humans’ agencies. The ability to control

technological design and development is a significant facet of social power relations.⁷³ ‘Smart borders’ are expected to be both biased and ambiguous.⁷⁴ They are biased by virtue of being developed for someone, and for some purpose, to paraphrase Robert Cox.⁷⁵ Yet they are also ambiguous, in that each stage of technological development and diffusion is likely to be shaped by competing political interests, contingency, and contestation. Chapters 3 and 4 demonstrate how, instead of empirical evidence incontrovertibly calling for security-oriented and data-driven surveillance tools to tackle readily identifiable security threats, in fact the development of ‘smart borders’ has been heavily influenced by the Commission’s political interests and its desire to bypass normal institutional oversight and safeguards.

Technological momentum, in turn, mediates between essentialist and instrumentalist perspectives on technology by emphasizing that as high-tech border control systems increase in complexity, their influence on the social world also increases. Technological momentum refers to the tendency of technical systems ‘to continue along a given path’ as a result of ‘the actions of numerous stakeholders, such as educational and regulatory institutions, the investment of billions of dollars in equipment, and the work and culture of people working within an industry.’⁷⁶ For instance, those pushing for increased use of public transport over private cars in order to ease congestion and pollution face significant material and social barriers that result from decades of widespread private car use, such as social expectations of rapidity and convenience of travel, and urban design that privileges private car owners.⁷⁷ So-called ‘legacy systems’ in the field of information technology are an example of technological momentum resulting from technical factors: the term refers to computer systems developed ‘years ago using outdated techniques’ that

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⁷³ McCarthy (2013: 476). Original emphasis.
⁷⁷ Beirão & Sarsfield Cabral (2007).
are inferior to currently available technical alternatives, yet which are still in use due to the prohibitive cost or complexity of updating the system.\textsuperscript{78}

Sociotechnical systems are most malleable to human action when they are relatively new, as their specific technical composition, goals, and scope are still contested. As they become more widespread and accepted, technological determinism begins to undermine social malleability as the sociotechnical systems become more difficult to contest or subvert, due to mechanisms of technological momentum such as sunk costs invested into the technologies and their success, social acceptability and incorporation into everyday routines, and the construction of other technical and social systems which build upon the previous sociotechnical system. In this way, technological momentum could explain why, once ‘smart border’ technologies become widespread or successfully legitimized, their opponents encounter very material—rather than solely ideational—friction when attempting to resist or reject these systems: sunk costs in the form of money, time, institutional frameworks, and social attitudes will favor the continued development and deployment of ‘smart borders’ over alternatives. As we shall see in Chapter 4, following the initial development of the ‘smart borders’ agenda, technological momentum has resulted in the proliferation of ‘smart border’ technologies in the EU.

**Conclusion**

By synthesizing existing insights into security and technology in global affairs, this chapter has constructed a theoretical framework which informs the substantive analysis in the next three chapters. In sum, ‘smart border’ technologies are conceptualized as securitization tools. These tools are understood more precisely as sociotechnical systems, which were shaped by political contestation during a critical juncture in migration-related policymaking in the EU between 1992-1997. That critical juncture resulted in institutional path dependence in the Commission’s conceptualization of

\textsuperscript{78} Bennett (1995).
migration as an EU-level security issue. Finally, since 2002, the Commission’s ‘smart borders’ agenda has gained *technological momentum*, further consolidating the securitization of migration and the Commission’s competences in this area, while also resulting in the proliferation of increasingly intrusive surveillance technologies at the EU external border.
Chapter 2 – The Securitization of Migration in the European Union

*Border management: it’s firstly security. Then migration management.*

– European Commission official, 2018

In February 1994, the European Commission proposed the expansion of EU-level competences over migration-related issues. In the proposal, the Commission argued that the main problem arising from irregular immigration into Europe was ‘illegal employment,’ while the main concern with regard to asylum seekers was ensuring that asylum applications are processed in ‘a fair and efficient manner.’ Remarkably, at no point did the document represent migrant flows as a security concern for the EU. The only linkage between migration and security was the concern that poorly coordinated migration policies would result in ‘insecurity for the immigrant,’ due to ambiguities in permanent residence status. Four years later, the tone of the Commission had changed significantly. Together with the Council in December 1998, it highlighted the ‘mutual interdependence’ of policies relating to ‘external borders, asylum, immigration and the prevention and combating of crime,’ with crime including ‘in particular terrorism,’ alongside other offences. This latter formulation has now become ubiquitous to the extent that the former document appears today at best idealistic, and at worse dangerously naïve: in December 2017, the Commission explicitly linked ‘an increase in irregular border crossings into the EU’ to ‘an evolving and ongoing threat to internal security as demonstrated by a series of terrorist attacks.’ Even the earlier discussion about ‘mutual interdependence’ of borders and security now seems distant: the two have fully merged into a single agenda to be addressed using a single set of policy tools.

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1 Interview COM-1.
3 For reasons of clarity, this thesis refers to the European Union (EU) also when discussing its earlier counterparts such as the European Communities, following accepted usage in academia and politics, and by the EU itself.
4 Ibid.: 34.
6 European Commission (2017: 1).
7 Ibid.: 11.
This chapter examines when and how migration has been included on the security agenda of the European Union, and thereby provides a historical basis for understanding the developments between 2001-2019, analyzed in the next two chapters. It argues against the traditional security studies perspective according to which the security policies of states, and by extension those of the EU composed of its 28 Member States, are determined by the presence of external threats.\(^8\) In that view, migration has been included on the security agenda since the 1990s and increasingly so after 9/11 due to a relatively straightforward response by the EU to new threats: migration in the post-Cold War era brings with it the threat of ‘clandestine transnational actors,’ that is, ‘the proliferation of a number of security threats to states that emanate from nonstate actors,’ prominently terrorism and organized crime.\(^9\) In the context of abolishing internal border controls in Europe, according to this view the EU institutions were bound to adopt a security-oriented approach to migration, given the threat of ‘border-free territorial access of [clandestine transnational actors].’\(^11\) In opposition to this traditional view, I draw on EU policy documents and legislation, as well as secondary literature, to argue that the inclusion of migration on the EU security agenda was neither inevitable nor primarily a response to changes in the external threat environment of the EU. Rather, it was the result of highly contingent political contestation, which had at its core questions regarding the correct extent of EU-level competences vis-à-vis the Member States. I argue that the period between the Maastricht Treaty of 1992 and the Amsterdam Treaty of 1997 was a critical juncture for the orientation of EU migration control policies. The result of this critical juncture was path dependence in the securitization of migration at the EU level.

This chapter makes two crucial contributions to answering the main research question of this thesis. First, it highlights the contingency of treating migration as a security issue within the European Union, in turn supporting the claim that we cannot assume border security policies are

\(^8\) See e.g. Walt (1987); Rudolph (2003).
\(^9\) Andreas (2003).
\(^11\) Andreas (2003: 100).
the result of a straightforward threat-response dynamic. Second, this background lays the basis for the next chapter, in which the development of ‘smart borders’ is analyzed, by highlighting how EU border security policies are subject to path dependence and attempts by the European Commission to consolidate its competences in the field of migration control.

Some necessary conditions must be met in order to determine that the period between the Treaty of Maastricht of 1992 and the Treaty of Amsterdam of 1997 was a critical juncture in terms of how migration was framed in EU-level policymaking. First, migration should not have already been conceptualized as a security issue at the EU level at the beginning of this juncture, but it should have been securitized at its close. Second, we must show that the securitization of migration during this period was not inevitable. In other words, it must have been surprising at the time, and unforeseen at the beginning of the critical juncture. Third, this period should have been marked by a relaxation of structural constraints on the actors involved, constituting a ‘window of opportunity’ which these actors then used in an attempt to expand their influence. Finally, the closing of the critical juncture in 1997 should have ‘locked in’ the outcome by setting off a path-dependent process of policy development which further entrenched the securitization of migration in the EU.

Pre-Maastricht Europe: Migration and the Internal Market

Migration has not always been conceptualized as a security issue for the European Union, nor did it figure very prominently on the EU policy agenda in its first decades. Freedom of movement for EU nationals dates back to the Treaty of Rome of 1957, which now forms part of the constitutional basis of the EU along with the Treaty on European Union (Maastricht). The Treaty of Rome created a common market among its signatories, based on the principle of free movement of goods, capital, services, and labor. Importantly, freedom of movement for persons

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12 Following its subsequent amendments at Maastricht and Lisbon, the Treaty of Rome in its current form is referred to as the Treaty on the Functioning of the European Union (TFEU).
14 Belgium, West Germany, France, Italy, Luxembourg, and the Netherlands.
was not granted to all citizens of EU Member States but rather to ‘workers.’ The scope of free movement did not expand until the Single European Act (SEA) of 1986, when it expanded to include workers’ families. It did not apply to all EU citizens until the establishment of European Citizenship at Maastricht in 1992. This slow evolution, and the long-standing focus on ‘workers’ rather than ‘citizens,’ demonstrates how freedom of movement as such was not always central to European integration, but was rather conceptualized as a spillover effect of the common market.

Developments between the 1950s and late 1980s also reflect important differences in how migration was framed by the EU institutions on the one hand, and its Member States on the other. EU institutions conceptualized migration mainly ‘in the context of social and economic rights and the construction of an integrated labor market in which workers could freely move between states.’ By referring to ‘workers of the Member States,’ the Treaty of Rome had left open the question of whether the workers in question even needed to be nationals of the Member States in which they were working. However, concerns regarding extra-EU immigration were salient within Member States, which quickly sought to clarify this ambiguity within the Treaty of Rome by adopting Council Regulation 1612/68 in 1968, which created a legal basis for distinguishing between the rights of EU nationals and third country nationals.

These differences between the focus of the EU institutions on free movement and the Member States’ focus on restrictive migration policies were still apparent in the mid-1980s. Comparing two significant initiatives, the Schengen Agreement of 1985 and the Single European Act (SEA) of 1986 is illustrative. Contention regarding the expansion of EU-level competences over migration and border controls forced the Schengen Agreement to be signed outside of the EU institutional framework. This intergovernmental agreement linked migration control to issues

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15 TFEU, Title IV, Chapter 1.
18 Council of the European Communities (1968: 475-484).
of security, and suggested that the abolition of internal borders required a concurrent strengthening of external borders.\textsuperscript{20} Meanwhile, the SEA focused entirely on the completion of the single market, defined again as ‘an area without internal frontiers in which the free movement of goods, persons, services and capital is ensured.’\textsuperscript{21} Immigration from non-EU countries was only mentioned when stating that the EU should ‘promote the free movement of persons.’\textsuperscript{22}

Whenever migration was linked to security in the pre-Maastricht era, this was done mainly by the Member States or national-level politicians arguing against further European integration, due to fears that more integration inevitably led to more immigration as a result of the liberal orientation of the EU institutions. For instance, French Senator Paul Masson argued that the abolition of internal borders and expansion of EU-level competences over migration policies would lead to ‘a Europe of insecurity.’\textsuperscript{23} Before the Maastricht Treaty, Member States guarded their sovereign power over migration control against encroachments by the EU institutions, and opted instead to cooperate on migration- and security-related issues through informal multilateral forums such as the intergovernmental Ad Hoc Group on Immigration and the transgovernmental working group on counter-terrorism, Trevi.\textsuperscript{24} The officials working in these groups came largely from Ministries of Interior and the police forces of the Member States, and promoted a security-oriented understanding of migration. Crucially, these groups existed well before the 1990s when the politicization and securitization of migration at a transnational level became widespread. Increasing national legal constraints in the 1970s and 1980s forced security-oriented migration experts onto the transnational level in order to effectively promote their interests.\textsuperscript{25} Their securitized framing of migration would later be picked up when the question of EU-level competences over migration-

\begin{flushleft}
\textsuperscript{20} Agreement of 14 June 1985 between the Governments of the States of the Benelux Economic Union, the Federal Republic of Germany and the French Republic on the gradual abolition of checks at their common borders, Article 17; See also O’Keeffe (1991: 193).
\textsuperscript{21} Single European Act [hereafter SEA], Article 13.
\textsuperscript{22} SEA, Political declaration by the Governments of the Member States on the free movement of persons.
\textsuperscript{23} Quoted in Bigo (1998: 153).
\textsuperscript{24} Kaunert (2010: 46–47).
\textsuperscript{25} Guiraudon (2003).
\end{flushleft}
related became politicized. Indeed, the sequencing of the creation of these groups, their promotion of security-oriented migration policies, and the securitization of migration at the EU level suggests that “‘solutions’ had been devised before ‘problems’ had been defined. The solution was police cooperation and reinforced controls.”

This overview of EU policymaking before the Maastricht Treaty suggests that before the 1990s, migration figured on the EU policymaking agenda mainly in the context of the common market. Moreover, the EU institutions had a reputation for promoting liberal migration policies, stressing the importance of freedom of movement and the protection of the rights of migrants. Contrasting this historical record with the heavily securitized understanding of the Commission after the Amsterdam Treaty suggests that the 1990s represent a turning point in terms of the dominant framings of migration in the EU.

**From Maastricht to Amsterdam: The Critical Juncture**

The Treaty of Maastricht, signed in 1992, represented a new phase in European integration, and is particularly significant in terms of its impact on the development of a European-wide migration control agenda. It created the ‘Three Pillar’ structure of the European Union, which signified the three policy areas relevant to EU policymaking, each with varying degrees of EU-level institutional influence vis-à-vis the authority of Member States. The first was the European Community pillar, including policy issues directly related to the common market, the area in which most sovereignty was ceded by Member States to EU institutions. The second pillar consisted of the Common Foreign and Security Policy (CFSP), to be defined and implemented through a mixture of EU-level and intergovernmental methods. The third pillar on Justice and Home Affairs (JHA) represented a commitment by Member States to cooperate in areas relevant to safety and judicial matters, and

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26 Ibid.: 268.
clearly represented a sustained reluctance by Member States to cede sovereign power in areas such as migration control and internal security.\textsuperscript{27}

In line with the institutionalist assumption that EU institutions act as ‘competence maximizers’ seeking to increase their autonomy,\textsuperscript{28} the European Commission attempted to expand the scope of EU-level competences in the run-up to the Maastricht Treaty. In its 1985 White Paper on ‘Completing the Internal Market,’\textsuperscript{29} the Commission argued for the expansion of EU-level competences over JHA-related issues such as migration and border controls due to their importance for the common market project, although JHA cooperation had previously been, by the Commission’s own admission, beyond ‘the scope of the Treaty [of Rome].’\textsuperscript{30} However, the Member States resisted ceding sovereignty in the area of JHA.\textsuperscript{31} At Maastricht, Member States were not convinced by the Commission’s arguments for further supranationalization, and thus Article K.1 in Title VI of the Maastricht Treaty explicitly retained intergovernmental authority on nine areas of ‘common interest:’ asylum, external borders, immigration policy and policy regarding third country nationals, combating drugs and fraud, judicial cooperation in civil and criminal matters, customs cooperation, and police cooperation.\textsuperscript{32} Although Article K.3(2) did institutionalize a role for the European Commission in JHA-related matters, it was only given a shared right of initiative along with the Member States and allowed to partake in policy discussions; this role was a far cry from the competences of the Commission in the first pillar.\textsuperscript{33}

These limitations notwithstanding, some observers argued that Maastricht signaled a ‘creeping supranationalization’ in JHA matters.\textsuperscript{34} Yet, as Andrew Geddes has noted, this view is

\textsuperscript{27} European Parliament (2019a).
\textsuperscript{28} Pollack (1998: 219).
\textsuperscript{29} Commission of the European Communities (1985).
\textsuperscript{30} Ibid.: 10.
\textsuperscript{31} Kaunert (2010: 48).
\textsuperscript{32} Combating drugs and combating fraud were listed as two distinct areas of common interest, as were judicial cooperation in civil matters and judicial cooperation in criminal matters, bringing the total number of areas of ‘common interest’ to nine.
\textsuperscript{33} Uçacer (2001: 4).
\textsuperscript{34} Kaunert (2010: 49).
based on teleological assumptions of a unidirectional drive towards ever-deeper integration; at the time, the expansion of EU-level competences was in fact highly controversial and hardly an inevitable outcome.\(^{35}\) The Maastricht Treaty did, however, open the door for contesting JHA-related competences at the Intergovernmental Conference (IGC) leading up to the Amsterdam Treaty. IGCS constitute some of the most politically contingent periods for European integration, during which the usual structural constraints for revising the institutional setup of the EU are significantly relaxed.\(^{36}\) This is why the period between the Maastricht and Amsterdam treaties can be characterized as a critical juncture, but this does not mean the expansion of the Commission’s powers in the field of JHA was inevitable. Indeed, discussing the communitarization of JHA at the IGC preparing the Amsterdam Treaty was extremely surprising at the time, even for those within the Commission, who ‘had resigned themselves to the prospect of no meaningful reform of the third pillar.’\(^{37}\)

The situation at the beginning of the critical juncture appeared to be as follows. The Commission sought to expand its competences by becoming more involved with migration control. The Member States claimed that migration and borders were rather questions of JHA and thus beyond the scope of the Commission’s competences. As attempts to convince the Member States by linking migration to the single market project had failed repeatedly, the Commission needed an alternative strategy for claiming that JHA-related matters should be dealt with at the EU level. Two strategies were tried in turn: normative arguments about the desirability of including JHA on the EU institutional agenda, and technical arguments relating to a conceptualization of migration as a transnational security issue, which could only be tackled by centralized supranational technical expertise. The first argument was enough to get JHA on the agenda of the IGC leading up to the Amsterdam Treaty—a highly unexpected turn of events at the time—but the second

\(^{37}\) Uçacer (2001: 10).
tipped the scales in favor of the expansion of EU-level competences over migration-related issues. It also resulted in path dependence in the securitization of migration at the EU-level, as thereafter securitization became central to justifications of EU-level competences in JHA.

The pillar structure enshrined at Maastricht was extensively criticized in the intervening years between Maastricht and Amsterdam. In particular, the third pillar on JHA cooperation was derided for reasons such as:

- the ineffectiveness of policymaking due to unanimity and the over-cumbersome five-tier decision-making structure;
- the absence of clearly defined objectives;
- the secretive negotiations;
- the absence of Parliamentary involvement and judicial supervision;
- the absence of binding legal instruments and the lack of enforcement mechanisms.38

These shortcomings provided grounds for the Commission to argue for further supranationalization in the area of JHA on normative grounds. In its 1995 ‘Report on the Operation of the Treaty on European Union,’ the Commission argued that the intergovernmental method of the third pillar was normatively undesirable due to the unpredictability, ineffectiveness, and secrecy intergovernmental negotiations, particularly as this pillar ‘directly affects individual rights.’39 Furthermore, it argued that these issues were particularly problematic in the field of migration control, due to ‘the obscure clarity of the dividing line between Community matters’ and intergovernmental issues, as the freedom of movement was simultaneously conceptualized as a first-pillar Community objective and a third-pillar area of ‘common interest’ in Article K.1 of the Maastricht Treaty.40 Significantly, at that time the Commission was still clearly committed to a desecuritized understanding of migration. It argued that the main dangers of poorly coordinated migration policies were ‘illegal employment’ and a lack of fairness and efficiency in processing asylum applications, and suggested strengthening the rights of third country nationals, developing

40 Ibid.: 52
better employment and education policies for immigrants, and combating racism and xenophobia within the EU.\textsuperscript{41}

These normative arguments did not convince all Member States of the desirability of supranationalization in the area of JHA. While Germany and France had been in favor of supranationalizing immigration and asylum policy,\textsuperscript{42} the United Kingdom, supported by Denmark and Sweden, jettisoned these proposals in its 1996 White Paper ‘A Partnership of Nations.’\textsuperscript{43} However, these normative criticisms were successful in getting JHA on the agenda of the IGC, a surprising development at the time.\textsuperscript{44} Recognizing that this was a window of opportunity, the Commission attempted to convince Member States to cede authority in this area. In order to rectify the shortcomings of the Maastricht Treaty, in 1996 it argued for the replacement of unanimity voting with qualified majority voting (QMV) and extending to the Commission the exclusive right of initiative in JHA-related areas, in particular issues relating to migration.\textsuperscript{45} In line with the ‘competence maximizer’ assumption, QMV and the exclusive right of initiative are key factors increasing the autonomy and agenda-setting powers of the Commission.\textsuperscript{46}

Aware of the pushback against its normative arguments, the Commission simultaneously reframed its arguments about migration. In contrast to its previous arguments relating to the internal market, as well as its focus on individuals rights and social responsibility, the Commission now argued that migration was linked to ‘crime, drugs, and terrorism,’ and, crucially, that such issues had ‘become international in scale; none of them stops at national borders.’\textsuperscript{47} This framing stands in remarkable contrast to the position of the Commission only two years earlier, and constitutes crucial evidence of a turning point in the Commission’s framing of migration. In other

\begin{flushleft}
\textsuperscript{41} Commission of the European Communities (1994: 42-43).
\textsuperscript{42} Geddes (2000: 115).
\textsuperscript{43} Milner (2017); Kaunert (2010: 52).
\textsuperscript{44} Guiraudon (2003: 270).
\textsuperscript{45} Commission of the European Communities (1996).
\textsuperscript{46} Pierson (1998: 36).
\textsuperscript{47} Commission of the European Communities (1996: 5). Emphasis added.
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words, the Commission had securitized migration at the EU level. Moreover, it presented this security issue as a technical one, most effectively tackled by the Commission due to its centralization of technical expertise at a supranational level: ‘the best way of [enhancing security] would be to transfer justice and home affairs to the Community framework.’

Although the Treaty of Amsterdam did not conclusively settle the question of Commission competences, it did mark the end of a critical juncture in terms of the dominant framing of migration at the EU level. Thereafter, the Commission viewed a securitized framing of migration as crucial to expanding its competences, and thereby desecuritization by the Commission became increasingly unlikely.

**An Area of Freedom, Security and Justice: The Path of Securitization**

Although the 1997 Treaty of Amsterdam might not be remembered ‘as the kind of watershed represented by its predecessors’ from the perspective of European integration, it was highly significant for the securitization of migration at the EU level. A central development was the creation of an ‘Area of Freedom, Security and Justice’ (AFSJ). The creation of the AFSJ transformed JHA-related issues from areas of ‘common interest,’ which should be pursued through intergovernmental cooperation in order to obtain objectives relating to the completion of the single market, into ‘an objective in itself.’

This implied legally that the EU would have to work to obtain these objectives. The legal basis of certain political actions could not be questioned any more on the grounds that it was not part and parcel of the “flanking measures” of the Single Market. […] [The Treaty of Amsterdam] provided a first step to decouple the Single Market from the broader objectives in the AFSJ.

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48 Ibid.: 7.
50 Treaty of Amsterdam Amending the Treaty on European Union, the Treaties Establishing the European Communities and Certain Related Acts [hereafter Treaty of Amsterdam]: 7.
51 Kaunert (2010: 52).
From the perspective of the securitization of migration, this development is crucial: it marks the end of the critical juncture during which securitization at the EU level was still highly contingent. The creation of the AFSJ brought migration and border control within the scope of issues the Commission could seek to expand its competences over without having to link these issues to the single market. No longer did the Commission need to highlight the economic impacts of migration, the social dislocation caused by poorly coordinated migration policies for migrant workers, or the normative desirability of supranationalizing migration control in order to protect individual rights. Towards the end of the pre-Amsterdam negotiations, the Commission had seen much more success with arguments stressing the linkages between migration and transnational security threats, and by claiming that migration control should be dealt with by an actor possessing sufficient technical expertise and institutional capacity to deal with these complex threats at the supranational level. Thereafter the Commission was committed to a securitized understanding of migration, seen as the best strategy for maximizing its competences over migration control.

A crucial outcome of the Treaty of Amsterdam and creation of the AFSJ was the partial communitarization of the previous third pillar on JHA. More precisely, it moved asylum, immigration, safeguarding the rights of nationals of third countries, and judicial cooperation in civil matters from the intergovernmental Title VI of the Maastricht Treaty (the third pillar) to Article 73 of the new, communitarized Title IIIa. While this development was a significant ‘break in the intergovernmental methodology to date,’ it did not in fact conclusively decide the question regarding EU-level competences over the AFSJ. The provisions of Article 73 would only come into force after a ‘transitional period of five years,’ during which the Commission would continue to share its right of initiative with Member States and the Council would continue to take decisions unanimously. While the Treaty ensured a move to the exclusive right to initiative of the

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52 Treaty of Amsterdam: 28-33.
54 Treaty of Amsterdam: 31.
Commission after the transitional period, it failed to ensure a move from unanimity voting in the Council to QMV. For this reason, some scholars assert that the Tampere Council of 1999, rather than the Amsterdam Treaty, marks the end of a critical juncture for the AFSJ.\(^{55}\)

However, developments at Tampere were already prefigured by the Amsterdam Treaty. Although the Amsterdam Treaty did not make inevitable all subsequent Commission policies on migration, it did create path dependence heavily favoring the securitization of migration at the EU level. The securitization of migration had become the most successful strategy for the Commission to expand its competences over migration-related issues. This already made it unlikely for the Commission to again reframe migration in the years following Amsterdam. Moreover, although the Amsterdam Treaty had left open the eventual extent of Commission competences over the AFSJ and deferred the one factor clearly set to increase the Commission’s autonomy—its exclusive right to initiative—by five years, in fact this ambiguity ultimately worked ‘to the Commission’s advantage.’\(^{56}\) It did so in two ways.

First, the policy areas communitarized by Article 73 of the Treaty of Amsterdam allowed the Commission to claim that an expanded institutional setup was required to effectively address these issues. After Amsterdam, and in the wider context of the resignation of the Santer Commission\(^{57}\) which heralded a reform process aiming at ‘efficiency, accountability, service and transparency,’\(^{58}\) the Commission successfully argued for the creation of the new Directorate-General for Justice and Home Affairs (DG JHA) led by Commissioner António Vitorino in September 1999. The creation of DG JHA quickly tripled the manpower available to the Commission on issues relating to the AFSJ.\(^{59}\)

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\(^{55}\) Kaunert (2010: 56).

\(^{56}\) Uçacer (2001: 11).

\(^{57}\) Following revelations by whistleblower Paul van Buitenen of widespread fraud and a ‘damning report by independent experts,’ the European Commission led by Jacques Santer collectively resigned in the face of mounting pressure to do so by the European Parliament in March 1999. See European Parliament (2010).

\(^{58}\) European Commission quoted in Uçacer (2001: 12).

\(^{59}\) Uçacer (2001: 12).
Second, the ambiguities in competences and the five-year transition period meant that a number of criticisms previously leveled against the intergovernmental third pillar still applied to AFSJ-policymaking between 1999-2004, including a lack of efficiency, expertise, and transparency.60 This created a window of opportunity for the Commission to demonstrate ‘its usefulness as a locus of technical expertise, institutional memory, and brokering between Member States,’ which could tilt the scales towards further supranationalization.61 An important example is the shared right of initiative. The expanded institutional capacity of the Commission as a result of the creation of DG JHA meant that it was able to table ‘better and more competitive’ proposals than any of the Member States.62 If the Commission had been given the exclusive right of initiative, its proposals would have been assessed on their own merits and thereby more carefully scrutinized by the Member States. Due to the shared right of initiative, however, these proposals often immediately appeared in a positive light when compared to the 15 hastily prepared Member State proposals.

By the time of the Tampere Council, then, Commission expertise on AFSJ-related issues was already widely accepted among Member States, and the Commission drew on this status to consolidate its competences over the AFSJ. On this basis the Commission was able to significantly influence the agenda of the Tampere Council, for instance via direct communication between Commission President Romano Prodi and Finnish Prime Minister Paavo Lipponen, and Commission officials lobbying national representatives ‘very hard and persistently’ before and during the summit.63 Commission expertise, in turn, had already previously been linked to a securitized framing of migration, and indeed the Presidency Conclusions of the Tampere summit

60 Kostakopoulou (2000: 504).
63 Ibid.: 59-69.
set migration on the same agenda as combating crime, drugs, and terrorism, focusing on ‘controlling and limiting migration’ rather than ‘measures protecting immigrants and refugees.’

At Tampere, the framing of migration as an EU-level security issue became consolidated. Thereafter, changes in the security environment of the EU, particularly when relating to terrorism, crime, and drugs, were immediately linked to migration control and perceived as within the competences of the European Commission. Thus, the European Council, in the immediate aftermath of the 9/11 attacks, called for ‘strengthen[ing] controls at external borders,’ and moreover asked the Commission in particular to submit proposals relating to internal security and migration control. The Commission responded by again highlighting the crucial role of ‘immigration and asylum authorities’ and ‘measures at the border’ in ‘identifying those suspected of terrorist involvement.’ It argued for a wide variety of measures to be taken at the EU external border to combat the terrorist threat, including pre-entry screening, the use of biometric data, and centralized information systems. Of course, the development of such tools would fall within the competences of the Commission, and would require its centralized technical expertise. Indeed, the somewhat casual listing of these tools seems remarkably prescient of what was to come in the years after 2001, as we shall see in the next chapter. The final confirmation of the extent to which migration had indeed become securitized at the EU level, and moreover seen as within the scope of the Commission’s competences and technical expertise came in December 2001, when the European Council in the Presidency Conclusions to its meeting at Laeken explicitly reaffirmed that ‘better management of the Union’s external borders will help in the fight against terrorism,’ and asked the Commission to ‘examine the conditions in which a mechanism or common services to control external borders could be created.’

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64 Huysmans (2006: 68); European Council (1999).
65 European Council (2001a).
67 Ibid.
68 European Council (2001b: para. 42).
Conclusion

This chapter has highlighted two important factors characterizing the historical development of the EU security agenda. First, migration has not always been on the EU security agenda, nor did it end up on that agenda in response to clearly identifiable external threats or as the result of a sudden exceptional discursive securitization. Rather, the securitization of migration at the EU level was a strategy adopted by the European Commission during the negotiations leading up to the Treaty of Amsterdam in the context of a critical juncture in terms of the scope of EU-level competences over JHA. This strategy, combined with the structural weaknesses of the Maastricht and Amsterdam Treaties regarding policymaking on JHA/AFSJ-related issues, ultimately resulted in Member States accepting the role of the European Commission as a legitimate actor in AFSJ-related policymaking.

Second, the Commission’s success with this strategy at Amsterdam resulted in path dependence in the securitization of migration at the EU level. Presenting migration as a transnational security threat, not only to Member States but also the EU itself, became crucial for the Commission’s legitimization of its role in the AFSJ. Policy developments from the Treaty of Amsterdam onwards can be described as path dependent due to two positive feedback processes since 1997: i) the investment of the Commission in the securitized framing, on which its legitimacy and scope of competences came to depend, and ii) actions by the Member States, who, having initially accepted the Commission’s securitization, thereafter began relying on it to produce proposals in accordance with the securitized framing. In time, as the Commission expanded its competences and perceived legitimacy over AFSJ-related issues, in particular migration control, desecuritizing migration became increasingly costly and undesirable for the Commission. Furthermore, as demonstrated in the next chapter, policy proposals based on a securitized framing of migration have since freed themselves from the need to empirically substantiate their necessity and proportionality, while alternatives face stark material and ideological barriers.
Chapter 3 – Border Security in the Twenty-First Century: Diffuse Threats and Rational Responses?

Nobody dares to ask: “What’s the evidence?”

– European Commission official, 2018

The previous chapter made clear that the securitization of migration at the EU level in the 1990s was the result of political contestation regarding the correct extent of EU-level competences in JHA, as well as the sources of legitimacy for EU-level action in this policy area. The result of the critical juncture of 1992-1997 was path dependence in the securitization of migration for the Commission, whose legitimacy in this area became connected to this framing of migration and the claim that its centralized technical expertise was the best strategy for tackling migration-related threats. In line with this argument, this chapter shows that from 2001 onwards, the trajectory of migration-related proposals by the European Commission—as part of its Integrated Border management (IBM) agenda—has been one of sustained securitization and increasing technicality.

According to the traditional account, post-2001 border security policies are mainly a clear-cut response to the new threat environment ushered in by globalization and made readily apparent by various terror attacks. Contrary to that account, this chapter demonstrates on the basis of document analysis and elite interviews that the continual ‘smartening’ of the external borders has not been an inevitable response to a new threat environment in which terror attacks have obviously resulted from a lack of information. Moreover, the Commission has not properly assessed policy alternatives, nor have traditional oversight and safeguard mechanisms been respected in the policymaking process. The findings of this chapter lay the basis for constructing a novel framework for understanding the development of ‘smart borders’ in the EU, a task undertaken in Chapter 4.

1 Interview COM-2.
The Traditional Account

The twenty-first century has brought with it the mixed blessing of globalization, understood as ‘the accelerating pace of transport, telecommunications, and information technology.’ According to a traditional security studies perspective, although globalization contains the potential for unforeseen economic prosperity, it also has a dark side: ‘organized crime, drug trafficking, and terrorism, aided by the latest information technology, are also growing, to the point where they already form a sinister underbelly of globalization that threatens the security of all countries.’ From this perspective, the security policies of states are understood as direct responses to external threats, which must be minimized before other goals such as ‘tranquility, profit, and power’ can be pursued. Given this threat-response dynamic, the argument is that terror attacks in the early 2000s ‘could not but raise concerns regarding the relationship between the cross-border mobility of people and international terrorism,’ in turn moving migration to the ‘top of the international security agenda’ and resulting in tougher border security policies across the United States and the European Union.

In essence, according to traditional accounts, the ascendancy and proliferation of ‘smart borders’ is explained as a rational response to a changing threat environment. This process of security policy formation is demonstrated in Figure 1, in which the boxes represent steps in the policymaking process, and the arrows between them represent the mechanisms leading from one step to the next. First, a changing threat environment catalyzes policymakers to assess and identify new security threats. Evidence of security breaches and threats suggests that a lack of information has been a shortcoming of existing security measures, leading to the identification of ‘information gaps’ as security threats. The Commission then conducts impact assessments to adjudicate between

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3 Flanagan et al. (2001: 7).
4 Ibid.: 12
5 Waltz (1979: 126).
potential policy alternatives, resulting in a proposal for a new system aimed at tackling the
dangerous ‘information gap.’ What follows is a process of political negotiation between the
Commission, Council, and Parliament, along with oversight from bodies such as the Fundamental
Rights Agency and the European Data Protection Supervisor (EDPS), finally resulting in the
creation of a new large-scale information system as part of the IBM agenda.

Figure 1: The Traditional Account of Border Security Policies

However, the historical development of the IBM agenda calls into question this account of the
policymaking process. The sections below demonstrate that the empirical evidence linking security
threats to information gaps about migrants is severely lacking, Commission proposals are not based
on impact assessments assessing alternative policy solutions, and political negotiations between the
Commission, Council, and Parliament are not based on evidence, nor are they characterized by
respect for oversight and safeguards.
The Origins of IBM: “What’s the Evidence?”

In December 2001, the European Council requested that the Council and Commission devise a plan for ‘more effective control of external borders.’ The Commission’s response to this request was the Integrated Border Management (IBM) agenda, which still forms the key strategic concept underlying EU external border management today. Although the IBM agenda originally encompassed a variety of non-technical elements such as common legislation and democratic control, its meaning has since shifted ‘to an almost exclusive focus on systems of collection, exchange and analysis of information,’ that is, to its ‘smart border’ components. In 2002, the Commission argued that IBM would ‘boost security’ by combating ‘terrorism, illegal immigration and trafficking in human beings.’ This claim should certainly be understood in the wider context of concerns regarding transnational terrorism in the wake of the 9/11 terror attacks. However, already at this early stage the straightforward empirical link between these terror attacks and the need for tougher border controls could have been questioned. Indeed, as recognized even by groups seeking to reduce immigration, the 9/11 attacks were not explicitly connected to border controls, as nearly all attackers were legally in the United States at the time of the attacks, and the three attackers who were illegally in the country had entered legally and overstayed their temporary visas. Tighter policing of illicit immigration would have no effect on apprehending such individuals in the future.

This disconnect between the lack of empirical evidence of a migration-terror nexus on the one hand, and the political response focusing on tighter migration controls on the other hand, became a familiar theme within IBM-related proposals from 2002 onwards. For instance, it was

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7 European Council (2001b: para. 42).
10 Jeandesboz (2016: 301).
apparent in the aftermath of the London bombings of July 2005.\textsuperscript{13} In this case, all attackers were British citizens, yet this attack was used by the Commission in 2007 as a justification for introducing the Passenger Name Record (PNR), a novel surveillance tool used to gather information on airline passengers.\textsuperscript{14} Similarly, the Eurodac\textsuperscript{15} system established in 2000 to support the operation of the Dublin Regulation by providing a centralized tool for processing the fingerprints of asylum seekers, was updated in a securitized fashion. In the aftermath of the 2004 Madrid terrorist attacks, the Commission proposed to expand the aims of Eurodac to include combating terrorism and crime by allowing access to law enforcement authorities, a measure ultimately adopted in 2013.\textsuperscript{16} This was in spite of the fact that no asylum seekers or refugees were suspected of being involved in the terrorist plot, and indeed the measure was criticized by the European Data Protection Supervisor (EDPS) on the grounds that it would give ‘law enforcement authorities access to data of individuals who in principle are not suspected of committing any crime.’\textsuperscript{17} This lack of empirical evidence to support the claim that migrants pose a significant threat of terrorism or crime has also characterized the development of the ‘smart borders,’ which since 2008 have constituted the main focus of IBM-related Commission proposals.

**The Entry-Exit System and Registered Traveler Program**

Following prior preparations for ‘smartening’ the EU’s external borders in a 2008 communication,\textsuperscript{18} in 2011 the Commission argued that a ‘smart borders’ package consisting of an Entry-Exit System (EES) and a Registered Traveler Program (RTP) would optimize ‘border check procedures and enhance the security’ of the EU.\textsuperscript{19} More specifically, it argued that the RTP would

\textsuperscript{13} Huysmans & Buonfino (2008).
\textsuperscript{14} European Commission (2007: 9).
\textsuperscript{15} Eurodac refers to the European Asylum Dactyloscopy Database.
\textsuperscript{16} Mitsilegas & Vavoula (2017: 240).
\textsuperscript{17} Quoted in Balzacq & Léonard (2013: 135).
\textsuperscript{18} European Commission (2008).
\textsuperscript{19} European Commission (2011: 4).
achieve the former goal, facilitation, while the EES would enhance security. The proposed RTP would have allowed third country nationals to undergo a ‘pre-vetting and pre-screening’ procedure before traveling in order to enroll in the RTP database and subsequently enjoy simplified border checks at airports.\(^\text{20}\) The claim that the proposed RTP would facilitate travel was made on the basis that similar schemes were already in operation, such as NEXUS at the US-Canadian border, Iris in the UK, and Privium in the Netherlands.\(^\text{21}\) However, the RTP was ultimately scrapped due to concerns about its cost and its relevance to non-EU citizens, as described by an official from the Commission:

There was a concern from the European Parliament, which said “you are spending a lot on a very specific number of persons” […] Then, when we redid the study on Entry-Exit, we looked at those RTP figures and we found out that the number of persons who register in the program is very limited […] it is not so much the third country nationals.\(^\text{22}\)

More interestingly—and almost entirely hidden from official documentation—the weakness of the evidence basis for claims about the RTP also became an obstacle:

Between brackets, on the RTP there was also not a lot of information available. In terms of what does it exactly bring, in terms of simplification of border control, not a lot of data available. And the only data that is always cited is the famous: “yes, RTP is only two percent of travelers but they represent 80, sometimes 90 percent of border controls.” I’ve never seen any basis [for those figures]. I believe that is just something that is put in the air, and that everybody repeats.\(^\text{23}\)

Notably, the Commission itself, in its 2013 ‘impact assessment’ of the potential RTP, repeated the above figures and subsequently concluded that the RTP would ‘significantly facilitate’ cross-border travel by reducing ‘waiting times at the border crossing point by up to 70% – 85%.’\(^\text{24}\) No source or method of calculation is given for such figures. Of course, the eventual abandonment of the RTP

\(^{20}\) Ibid.
\(^{21}\) Ibid.: 6.
\(^{22}\) Interview with European Commission official, COM-3.
\(^{23}\) Ibid.
\(^{24}\) European Commission (2013b: 50).
suggests that a lack of firm evidence to support proposals could lead to their withdrawal. However, the eventual adoption of the EES proposal proves that this is not always the case.

The EES is an automated information system that will be used to electronically log the time and place of entry and exit of all third country nationals traveling to the EU. Upon arrival to the EU, a biometric facial image and four fingerprints will be collected to allow for identification via biometric matching later on. The scale of the centralized database of biometric data will be immense: the Commission estimates that it will cumulate hundreds of millions of records within two years of operation, an order of magnitude more than previous systems such as the VIS. But what exactly are the aims of the EES, and how will it fulfil them, according to the Commission?

In the final EES proposal of 2016, adopted as Regulation (EU) 2017/2226 in November 2017, the EES has three main objectives: i) addressing border check delays, thereby facilitating travel; ii) identifying overstayers which ‘will in turn facilitate the return process;’ and iii) ‘reinforcing internal security and the fight against terrorism and serious crime’ by allowing law enforcement access to the EES database across the EU. Comparing these finalized objectives of the EES to earlier iterations already reveals what the European Parliament called ‘a regular and repeated shuffling of objectives.’ In its 2008 communication on ‘smart borders,’ the Commission argued that the main objective was the intensified monitoring of non-EU citizens and facilitating travel for ‘bona fide’ citizens. In 2011, the Commission had reframed the ‘smart borders’ package as a flanking measure to changing visa policies, with gathering information on overstayers as a ‘secondary objective.’ In 2013, the main focus was on migration policy and ‘taking steps against overstayers,’ with no mention of the enhancement of internal security as an objective of the package. This already raises concerns of post hoc justifications, echoed by an official from the EDPS:

The Commission does give examples in its proposals, but these are not always explained or supported by evidence. They come up with an idea, and then they justify it.29 Could it be, however, that the eventual adoption of an EES focused on addressing delays at the border, combating overstaying, and enhancing security reflects the fact that ultimately it is these goals which currently present the most pressing issues for EU migration policy, and which the EES is best suited to tackle? Not so, according to evidence presented by the Commission, the European Parliament, and the EDPS.

The Commission itself undermined the credibility of claiming that the EES would reduce delays at borders back in 2011, when it claimed that moving ahead with only the EES proposal and withdrawing the RTP ‘would only reinforce security without facilitating travel of third country nationals.’30 It reiterated this point as late as 2013, in the last set of proposals before the withdrawal of the RTP, when it explicitly stated that ‘facilitating and speeding up border crossings’ was an objective for the RTP, not the EES.31 In fact, a 2014 technical study by PricewaterhouseCoopers (PwC) found that the EES ‘would add to the duration of border crossing’ due to the time-consuming nature of biometric enrolment.32 Ultimately, the claim about facilitating border crossings is made on the basis that the EES proposal does not prohibit national-level measures at the discretion of individual Member States,33 a point recognized and criticized by the European Parliament.34

An official from the Commission commented on facilitation:

Researcher: When withdrawing the RTP, was there any pressure to still have some aspect of facilitation in the Entry-Exit System?

Commission official: Yes, we understood that. [...] So, we didn’t turn it completely off. It is allowed at the national level, so we can still say there can be some facilitation.35

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29 Interview with EDPS official, EDPS-1.
30 European Commission (2011: 8).
33 European Union (2017: Article 6(3)).
35 Interview with European Commission official, COM-4.
It appears that the Commission is well aware of the indirect way in which the EES might allow for facilitation, yet facilitation continues to constitute a key justification for the establishment of this system.

As for the claim that the EES will ‘facilitate the return process’ through the ‘identification and detection of overstayers,’ very little empirical evidence regarding the issue of overstayers in the Schengen area exists, and the contribution of the EES to curbing overstaying is similarly lacking in evidence. As the European Parliament notes, ‘there is no information as to the actual scope of the overstay problem that the EES sets out to address.’\(^{36}\) Indeed, the Commission itself seems to move back and forth on this issue: at times it argues that overstayers ‘constitute a serious problem,’\(^ {37}\) backing such claims up by estimates of up to 3.8 million overstayers,\(^ {38}\) while elsewhere it recognizes that no ‘data or any reliable estimates on the number of overstayers’ within the EU exist.\(^ {39}\) Officials working within the Commission are well aware of the lack of evidence to support their claims:

That is a weak part in our justification. Nobody knows how many [overstayers] there are […] In the only study that is being referred to, the amount we came up with is about 250,000 people.\(^ {40}\)

Furthermore, even if reliable figures were available, it is far from clear that the EES would do much to help with actually detecting and apprehending overstayers within the Schengen area. After all, the EES would operate only at border checkpoints, and therefore could only identify overstayers once they are already exiting the Schengen area:

If you have such a list, the idea would be that […] these people would be actually identified and then asked to leave the territory. It’s to be seen whether all of that is going to happen. […] But in a way, a stupid device like the Entry-Exit System could work as an incentive, a trigger, a catalyst for much deeper reforms.\(^ {41}\)

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\(^{39}\) European Commission (2013a: 9).
\(^{40}\) Interview with European Commission official, COM-2.
\(^{41}\) Interview with European Commission official, COM-4.
In other words, the contribution of the EES to curbing overstaying seems dubious. What is more, in contrast to the official Regulation, which claims that the EES will directly aid in the detection of overstayers,\textsuperscript{42} for Commission officials its potential contribution—questionable as it is—would come indirectly, through triggering ‘deeper reforms.’

Finally, the claim that the EES would ‘contribute to the prevention, detection and investigation of terrorist offences or other serious criminal offences’\textsuperscript{43} is made on the basis that law enforcement access to EES data is provided from the outset. In its 2013 EES proposal the Commission referred to law enforcement access as a measure to be potentially adopted in the future, pending a two-year evaluation period and impact assessment determining the necessity and proportionality for such a measure.\textsuperscript{44} In the 2016 proposal and in the 2017 EES Regulation, however, law enforcement access is envisaged from the outset.\textsuperscript{45} However, the empirical evidence demonstrating the necessity and added value of law enforcement access is again highly questionable. The Commission claims in its 2016 EES proposal that the contribution of migration-related EU-wide information systems in combating terrorism and organized crime has been demonstrated by the VIS: ‘the access to VIS data by law enforcement has already proven its usefulness.’\textsuperscript{46} It makes this claim on the basis of a 2014 technical study, again by PricewaterhouseCoopers. In that report, however, PwC found that the VIS was in fact not used much for law enforcement purposes, and concludes that ‘it is reasonable to assume that access by law enforcement authorities to EES would remain limited’ as well.\textsuperscript{47} The European Parliament, on the basis of a newer technical study by eu-LISA,\textsuperscript{48} argued that no ‘conclusive evidence’ exists on

\textsuperscript{42} European Union (2017: Article 6(1)(c)).
\textsuperscript{43} European Union (2017: Article 6(2)(a)).
\textsuperscript{44} European Commission (2013c: 5).
\textsuperscript{45} European Commission (2016c: 6); European Union (2017: Chapter IV).
\textsuperscript{46} European Commission (2016c: 6).
\textsuperscript{47} PricewaterhouseCoopers (2014: 217)
\textsuperscript{48} The European Union Agency for the Operational Management of Large-Scale Information Systems in the Area of Freedom, Security and Justice.
‘the usefulness and proportionality of law enforcement access to VIS.’\textsuperscript{49} Again, officials in the Commission are not misguided in their understanding of existing evidence:

Well, we have information that is collected by eu-LISA, but we don’t distinguish for which purpose [the systems] are used.\textsuperscript{50}

This directly contradicts the official claim that the usefulness of the purpose of law enforcement access specifically would already have been empirically proven.

**The European Travel Information and Authorization System**

The European Travel Information and Authorization System (ETIAS) presents another example of the lack of empirical evidence informing the Commission’s claims about the need and usefulness of the systems which they are proposing. It also calls into question whether the Commission properly considers alternatives to its proposed solutions, as well as whether the policymaking process contains due oversight and safeguards.

The ETIAS will be ‘an automated online system for identifying any irregular migration, security or public-health risk associated with visa-exempt third country nationals travelling to the EU,’ and is due to be operational by 2021.\textsuperscript{51} It will require all visa-exempt third country nationals to apply online for travel authorization, without which they will not be able to travel to the EU.\textsuperscript{52} Applicants provide a variety of personal information such as travel document details, email addresses and phone numbers, educational and occupational background, and health information.\textsuperscript{53} This information will then undergo an automated three-step processing by the ETIAS central system: 

\textit{i)} checks against other EU-wide information systems, such as the EES, SIS II, and VIS, among others; 

\textit{ii)} screening against a dedicated ‘ETIAS watchlist,’ a database of both known

\textsuperscript{49} European Parliament (2016: 24).
\textsuperscript{50} Interview with European Commission official, COM-5.
\textsuperscript{51} European Parliamentary Research Service (2017: 6).
\textsuperscript{52} European Union (2018: Article 37).
\textsuperscript{53} European Union (2018: Article 17(2)).
criminals and terrorists, as well as those suspected of such offences; and iii) automated ‘profiling’ by an algorithm, which seeks to identify potentially ‘risky’ individuals previously unknown to authorities and pre-emptively deny travel authorization from those deemed ‘security, illegal immigration or high epidemic risks.’

In its 2016 proposal, the Commission justifies the need for the ETIAS system with reference specifically to an expected increase in the number of visa-exempt third country nationals traveling to the EU as a result of ‘the EU’s visa liberalization policy.’ The proposal highlights the need for tougher security measures against visa-exempt third country nationals by linking visa liberalization to such issues as ‘terrorist attacks,’ thereby reflecting continuity in the prior securitization of migration at the EU level. As the European Parliament has pointed out, however, already here we find a ‘gap in reasoning in the proposal’ as ‘tackling increasing traveler flows could be seen as a matter of facilitation rather than security. There is, in fact, no clearly explained logical connection in the ETIAS proposal between the problem addressed and the measure’s objectives.’

In the words of an exasperated official from the EDPS: “The ETIAS is the most useless system [the Commission] are building.” A senior official working on the ETIAS within the Commission was aware of these criticisms, and overall it seemed the Commission had been caught off guard by the adoption of the ETIAS despite the apparent shortcomings of the proposal:

[The ETIAS is] not substantially different from what you could also do at borders at the moment when the person arrives. So, you can immediately ask: “okay, why do you need ETIAS if you already have the Entry-Exit System?” That was a very valid question. […] I’m surprised it went so quick, because of the fact that one could argue that it’s not really necessary.

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54 European union (2018: Articles 20, 33, 34).
57 Interview with EDPS official, EDPS-1.
58 Interview with European Commission senior official, COM-6.
Assessing the basis on which the Commission claims the ETIAS responds to clearly identifiable needs, and that it would be effective in achieving its objectives, is remarkably difficult for two reasons highlighted by the European Parliament: the Commission has not carried out an impact assessment for ETIAS, and the proposal itself seems to ‘accumulate objectives,’ making it ‘difficult to ascertain what parts and to what extent the measure is necessary in the first place.’ These shortcomings directly undermine existing EU policymaking safeguards, notably the Commission’s own ‘Better Regulations Guidelines’ which state that ‘an impact assessment must identify and describe the problem to be tackled, establish objectives, formulate policy options, assess the impacts of these options and describe how the expected results will be monitored,’ as well as the Interinstitutional Agreement on Better Law-Making of 2016, which views impact assessments as a necessary component for reaching ‘well-informed decisions’ on EU-level policies. Nonetheless, the Commission itself recognizes that the only basis for the claims made in the ETIAS Proposal and the ETIAS Regulation are based on its own 2016 ‘feasibility study.’ The European Parliament rightly points out that whereas an impact assessment would assess the necessity, suitability, and fundamental rights implications of a proposal, a feasibility study is simply aimed at establishing the technical feasibility of a pre-existing preferred policy option. The ‘accumulation of objectives,’ on the other hand, refers to the fact that the ETIAS Regulation sets out no less than six primary objectives, and at no point does the Regulation specify which measures within ETIAS are meant to tackle each particular objective.

The severe lack of evidence to support the establishment of an ETIAS is particularly extraordinary given the speed at which the Commission itself has changed its view on the need for such a system. In 2008, it mentioned in passing the possibility of introducing an Electronic System

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64 Ibid.: 19.
of Travel Authorization (ESTA) but did not pursue this idea further. Three years later, in its 2011 communication on ‘smart borders,’ the Commission revisited a potential EU ESTA, but again discarded the idea. The reasons given are worth quoting at length:

The potential contribution to enhancing the security of the Member States would neither justify the collection of personal data at such a scale nor the financial cost and the impact on international relations. As for the gradual substitution of the visa requirement by an EU ESTA, it seems unfeasible for the foreseeable future, given the difficulty to assess the migratory risk and the problems linked to internet access and the use of electronic identification. […] It is clear that any EU ESTA […] cannot be used to monitor actual border crossings. Neither is it relevant for facilitating such border crossings.

These conclusions are remarkable not only in their complete rejection of an ESTA less than five years prior to the tabling of a fully-fledged ETIAS proposal, but also because the reasons for discarding it are in direct contradiction to the justifications given in 2016. This point is crucial, as the speed with which the Commission seems to have completely reversed its position on the ETIAS certainly calls for persuasive empirical evidence of ‘major documented changes’ explaining this reversal. Yet, as we have seen, the evidence basis for the ETIAS is even less convincing than that of the EES. In addition to the European Parliament expressing its concerns about the speed with which the Commission has reversed its position on ETIAS, the EDPS seems to be concerned as well:

Everything is taking place really fast. […] The proposals are being rushed through so quickly that it is hard [for the Commission] to take into account our recommendations. Let’s be honest, these systems don’t always comply with the Charter of Fundamental Rights.

Although official Commission documents hardly mention the reversal of opinion and the speed of the proposal process, officials within the Commission are aware of these factors:

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65 Vavoula (2017: 2).
68 Interview with senior EDPS official, EDPS-2.
Commission official: ETIAS went very fast because, as you know, we didn’t do any impact studies for that.

Researcher: Is that an issue?

Commission official: That was an issue, and also a risk [...] because we thought that it could actually be blocked because of that reason.⁶⁹

What is more, it seems the speed with which the reversal of opinion has been communicated, and the proposals pushed through, has been a conscious strategic choice by the Commission:

Commission official: Overall, I must say that speed is usually helping a lot, for the Commission at least.

Researcher: What do you mean by helping?

Commission official: It allows you to make some shortcuts in your procedures [e.g. impact assessments and safeguards]. They are there for a reason, but many of them are useless. [...] In that sense, I was a happy man to be able to deliver fast on some of these systems and these ideas.⁷⁰

Conclusion

The findings above suggest that the empirical evidence supposedly proving the need for ‘smart borders’ and their suitability for reaching their objectives is highly inconclusive at best, and completely lacking at worst. The adoption of the EES demonstrated that even when the Commission is challenged to produce evidence to support its claims, this evidence does not need to be of a very high standard for proposals to be successful. The adoption of the ETIAS has not only confirmed that finding, but moreover suggests that no longer is the Commission even forced to jump through the hoops of regular institutional accountability and transparency procedures.

These findings undermine the traditional security studies account of the proliferation of ‘smart borders’ in the EU, presented in Figure 1, by calling into question all three mechanisms connecting the steps in the policymaking process. The empirical evidence to connect security threats to a lack of information about migrants is nonexistent, technical impact assessments

⁶⁹ Interview with European Commission official, COM-4.
⁷⁰ Interview with European Commission official, COM-5.
assessing alternative policies have not been conducted, and due safeguards and oversight in the political negotiation process have been circumvented. Evidently, an alternative framework is needed to make sense of the ascendancy and proliferation of ‘smart border’ technologies in the EU. Such a framework is proposed in the following chapter.
Chapter 4 – Security and Sociotechnical Systems: An Alternative Framework

Is this the direction we want to take? And if not, where do we come to stop it?

– European Commission senior official, 2018

The previous chapter demonstrated the weaknesses of the traditional account of why and how ‘smart border’ technologies have proliferated in the European Union since 2001. By synthesizing insights from critical security studies and Actor-Network Theory, this chapter presents an alternative framework for understanding the ascendancy of ‘smart borders,’ supported by empirical evidence from document analysis and elite interviews.

Insights from critical security studies are used to demonstrate the role of discursive and institutional processes of securitization, which have been utilized by the Commission to consolidate and legitimize its competences and expertise in the area of migration control, in the context of path dependence that resulted from the critical juncture examined in Chapter 2. However, this leaves unexplained the specific focus on data collection via large-scale information systems and the continued proliferation of these systems despite their evident shortcomings.

In order to specify these mechanisms, I draw on Actor-Network Theory (ANT) to construct a model explaining the proliferation of ‘smart border’ technologies in the EU. This model takes the form of a positive feedback loop of technological momentum, that is, the tendency of complex technical systems ‘to continue along a given path’ as a result of ‘the actions of numerous stakeholders, such as educational and regulatory institutions, the investment of billions of dollars in equipment, and the work and culture of people working within an industry.’ Technological momentum has been reinforced through conscious efforts by the Commission to promote the use

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1 Interview COM-6.
of centralized large-scale information systems, particularly by \(i\) linking these tools to a preemptive and data-driven approach to security, and \(ii\) by obscuring the political nature of the complex systems it has proposed and built. These efforts are described by two notions adopted from ANT: translation and black-boxing, respectively. However, the feedback loop of technological momentum is driven also by technical imperatives inherent in the technologies themselves. In other words, ‘smart border’ technologies have had an independent impact on the nature of EU border security policies since 2001—by creating a slippery slope towards increasingly intrusive and exclusionary surveillance technologies—which was unforeseen and unintended by the human actors developing these systems in the first place.

**Exceptional and Unexceptional Securitization**

The security-oriented nature of the Commission’s IBM-related proposals is in line with the path dependence of securitization, which became ‘locked in’ in the late 1990s. The success of the security framing as a strategy to pursue expanded EU-level competences over JHA ensured that the Commission would continue to reify a securitized understanding of migration in its proposals, while the Member States’ prior acceptance of both securitization at the EU level and the importance of centralized technical expertise ensured that the Council would not seek to challenge this framing in its assessment of the Commission’s proposals. This is reflected in the Council’s selective endorsement of some components of IBM, but not others: those which appeared too political by suggesting the need for a further pooling of sovereign authority were jettisoned, while those in line with the prior legitimation of EU-level border security competences as resulting from a need for technical expertise to counter security threats were supported.

The 2002 IBM agenda was, compared to its later iterations, remarkably multidimensional. The Commission argued that it should include such components as common legislation, operational cooperation mechanisms, a European Corps of Border Guards (ECBG), and
mechanisms for democratic control. Although the 2002 IBM agenda most certainly reflects a step down the path of securitization given its explicit linking of migration and transnational security threats, it is clear that the Commission had not yet identified the most productive avenue for consolidating its legitimacy in the eyes of Member States. In other words, while path dependence in the securitization of migration was already evident, the exact nature of security-oriented migration control measures was still undetermined.

The response of the European Council to the original IBM agenda came in June 2002, in its ‘Plan for the management of the external borders of the Member States of the European Union.’ The document outlined a number of measures to be taken in order to pursue the IBM agenda, including a ‘common operational coordination and cooperation mechanism’ and a ‘common integrated risk analysis.’ This plan was rightly seen by observers as having ‘watered down’ the more ‘integrationist moves of the Commission,’ such as the creation of the ECBG. Nonetheless, the Council did accept the Commission’s views on the necessity of centralized information exchange and risk assessment measures in countering the transnational threat posed by migration. This selective endorsement signaled to the Commission that Member States would accept its proposals for JHA-related measures so long as they are security-oriented and seemingly more technical than political. The creation of centralized information systems emerged as the most fruitful avenue for expanding the Commission’s competences and consolidating its authority in this policy area. An in-depth examination of ‘smart borders’ confirms that, firstly, the success of Commission proposals is directly linked to the securitization of migration at the EU level as well as the technical nature of its proposals, and, second, that the Commission actively takes this into account when formulating proposals in order to expand and consolidate its competences.

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4 European Council (2002).
5 Ibid.: 12.
6 Neal (2009: 341). Although the ECBG was jettisoned by the Council at this stage, FRONTEX was of course established a mere two years later in 2004. However, by that time Member States had ensured that FRONTEX was to be under joint intergovernmental and supranational control, unlike other EU agencies. See Ibid.: 343.
The previous chapter demonstrated how weak the empirical evidence to support security-oriented migration control measures has been in recent years. Nonetheless, the most successful Commission proposals have been those concerned with ‘enhancing the security’ of the EU, while others, such as the facilitation-oriented RTP, have failed. Commission officials know this, and in fact events such as terror attacks are routinely acknowledged by Commission officials not to constitute clear evidence of migration being a security threat, yet nonetheless acting as windows of opportunity for the Commission to table new security-oriented proposals:

It's always the window of opportunity that you have because of certain events [terrorist attacks]. It's not really a crisis, of course, but combining the security situation and the migration situation gets attention from Member States.7

This is in line with the predictions of the Copenhagen School of critical security studies: security emergencies are used to legitimize exceptional actions.8

Notably, however, although supposed security crises are seen as windows of opportunity, once proposals have been accepted the crisis framing becomes a nuisance for the Commission. Evidently, after the initial emergency framing, high levels of politicization begin to constrain the Commission due to increased levels of oversight and a demand for effective solutions:

Commission senior official: We want to get out of emergency mode, because this is not sustainable.
Researcher: Would that be easier if migration was less politicized?
Commission senior official: Yes, definitely.
Researcher: So, there are tensions between the political level and the operational level?
Commission senior official: There are tensions, yes. The expectations are high [...] You are always welcome if you come as the good messenger but not as the bad messenger.9

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7 Interview with European Commission senior official, COM-6.
8 Buzan et al. (1998: 5).
9 Interview with European Commission senior official, COM-7.
For the Commission, while perceived security crises are helpful in pushing through new proposals, high levels of politicization thereafter fetter its autonomy in the implementation phase. Such autonomy constitutes a key source of its power, as important political and operational decisions remain undetermined even once official regulations are adopted:

Some things are still unknown. That’s what we now have to solve through these implementing decisions.\(^{10}\)

Indeed, officials were relieved when it seemed that the ETIAS and Interoperability Framework proposals would finally be adopted, and it could again seek to move away from the watchful eye of the Council and the Parliament. Crucial to justifying its autonomy and secrecy once proposals have been adopted are claims about the technical nature of implementation and the expertise of the Commission:

\textit{Commission official}: The biggest problem is to implement it all properly. This will take many years […]

\textit{Researcher}: So, are the main obstacles technical or political?

\textit{Commission official}: They’re technical, and operational. That’s for all the systems.\(^{11}\)

The desire of the Commission to ‘get out of emergency mode,’ in order to be able to implement its preferred security-oriented solutions, align with Paris School predictions about the diffuse institutional processes of securitization. In addition to using security emergencies to push through exceptional measures, the Commission intermittently seeks to depoliticize its proposed security measures by claiming ‘expertise,’ so that it may ‘\textit{construct}’ problems in a way that enables them to use [its] traditional “solutions”.\(^{12}\)

This back-and-forth between securitization opening up windows of opportunity for the Commission to push through its proposals swiftly, and the depoliticization of these issues as

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\(^{10}\) Interview with European Commission official, COM-5.

\(^{11}\) Interview with European Commission senior official, COM-6.

technical once proposals have been adopted, has been noted by the European Parliament and the EDPS. The Parliament argued that the latest proposals of the Commission, including the ETIAS and the Interoperability Framework, are the result of ‘legislative inertia and path dependency […] in framing increased traveler flows across EU external borders as a matter of security rather than facilitation.” An official from the Parliament highlighted how decisions relating to the implementation of systems such as ETIAS, which aim to exclude individuals from traveling to the EU, provide evidence for criminal convictions, and categorize individuals according to ‘risk profiles,’ are inherently political:

Of course it is political. There is no oversight by the Council, no oversight by the Parliament. This is obviously a concern.  

The concerns of the European Parliament were echoed by a senior official from the EDPS:

ETIAS and Interoperability have been rushed through quickly, and without enough oversight or technical quality control. […] These systems are being set up without thinking whether they are necessary or proportionate. […] What is the real reason? 

The analysis above has suggested that the real reason is that security-oriented, high-tech migration control systems constitute the most successful avenue for the Commission to expand its competences and legitimize its actions in this policy area. Officials are aware that their autonomy depends on claiming technical expertise over security-related issues, and therefore reify the securitization of migration at the EU level by proposing highly technical security-oriented migration management tools, developed by the supposedly apolitical experts within the Commission:

Integrated border management […] is nothing political, it should not be anything political. […] Migration should be managed by professionals, not by politicians. And apart from that, [through IBM] the European Union is more and more visible and present in the border management of the EU external borders and also internal borders.

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15 Interview with EDPS senior official, EDPS-2.
16 Interview with European Commission official, COM-8.
Another official succinctly commented: ‘Our role is technical rather than political.’ Of course, given the political significance of ‘smart borders’ and their direct impact on the wellbeing and rights of travelers, as highlighted by the European Parliament and the EDPS, this description of the Commission’s activities appears quite remarkable.

These findings suggest that the Commission has sought to increase its autonomy and circumvent usual safeguards in the policymaking process by utilizing both discursive securitizations and more diffuse institutional processes to consolidate border security and migration control as matters of the Commission’s technical expertise. What remain to be understood, however, are the mechanisms determining the specific composition of ‘smart border’ systems and allowing for their proliferation despite their significant shortcomings and potential for political contestation.

**Sociotechnical Systems, Technological Momentum, and the Agency of Experts**

In response to the Council’s selective endorsement of the Commission’s authority over information exchange and risk management, but not the other areas of the 2002 IBM agenda, the Commission decided to focus on proposing security-oriented large-scale information systems as a strategy to consolidate its legitimacy in this policy area in the short run. However, the Commission did not originally foresee an almost exclusive focus on such systems further down the line:

> In the beginning we thought that it would be two projects [SIS and VIS] and then finished, and people would be reassigned to something else. But then it continued on, when we realized that indeed information systems are also a way to implement policies.\(^{18}\)

The successful establishment of the Schengen Information System (SIS) and VIS, however, paved the way for a continued focus on information systems:

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\(^{17}\) Personal correspondence with European Commission official. Permission to quote this line was given by the official.

\(^{18}\) Interview with European Commission official, COM-3.
We see that that it’s possible to have such a large-scale IT system, which is already exceptional because of all the challenges we have. [...] With the SIS, indeed we see that if we can do that, then it’s possible.\textsuperscript{19}

However, prior systems did not immediately pave the way for more systems, as in fact their successes did not merit the proliferation of systems but rather the expansion of existing ones:

None of the new IT systems will duplicate the SIS. [...] The success story of the SIS [means] that we will further develop the SIS itself to contain more information. This is a call that we received: instead of creating new systems, we should use the existing systems and extend their possibilities.\textsuperscript{20}

What, then, explains the proliferation of ‘smart border’ technologies?

‘Smart Borders’: A Sociotechnical Feedback Loop

An alternative account of the policymaking process underlying the proliferation of ‘smart borders’ is presented in Figure 2. It stands in sharp contrast to the traditional account presented in Figure 1 in the previous chapter. Most notably, the policymaking process is no longer represented as a bounded process which ends with the creation of a new information system, but rather as a positive feedback loop in which the creation of a new system feeds into the process and begins the cycle anew. The feedback loop consists of \textit{i)} the creation of a new system; \textit{ii)} identifying the shortcomings of prior systems, often simply arising from their limited scope which was previously perceived as reasonable; \textit{iii)} reconceptualizing shortcomings as a ‘information gaps;’ \textit{iv)} presenting ‘information gaps’ as potentially dangerous; and \textit{v)} proposing a new system to tackle this ‘information gap,’ after which this new system is subjected to the same feedback loop.

\textsuperscript{19} Interview with European Commission official, COM-9.
\textsuperscript{20} Ibid.
This feedback loop explains the proliferation of ‘smart borders’ in the EU. Crucially, it reflects technological momentum, that is, the tendency of sociotechnical systems ‘to continue along a given path’ as a result of ‘the actions of numerous stakeholders, such as educational and regulatory institutions, the investment of billions of dollars in equipment, and the work and culture of people working within an industry.’

Technological momentum did not originate in the intentional action of human agents. One of its driving mechanisms has been the inherent properties of the technologies themselves, demonstrating the independent causal effects of technological systems. Such technological imperatives constitute a step in the feedback loop which is currently overlooked by both traditional and critical accounts of security policies. However, technical imperatives do not explain everything. Rather, they constitute a necessary but not sufficient condition for the emergence and perpetuation of this feedback loop, which has only been completed by actions taken by the humans involved in this sociotechnical system. The term ‘sociotechnical’ is crucial: it highlights the causal significance of both material and human factors, while existing accounts tend to privilege one or the other.

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The Mechanisms of Momentum

This combination of material and human causal impacts, which are jointly sufficient to complete the feedback loop of technological momentum driving the proliferation of ‘smart borders,’ can be clarified by explicating the causal mechanisms found in each step of the feedback loop. This is done in Figure 3 below.

![Figure 3: The Mechanisms of Technological Momentum](image)

The independent causal impact of technological systems is evident in the first mechanism, technical imperatives. We saw above that the establishment of prior large-scale information systems did not merit the creation of new technologies, but rather the expansion of existing systems. In fact, it is with reference to what prior systems are not capable of doing that the proliferation of ‘smart border’ technologies has been justified, even if during the proposal process such limitations were simply seen as the result of impracticality or a lack of necessity.\(^{22}\) For instance, the establishment of the VIS clearly signaled ‘an element of suspicion against visa applicants,’ seen as potential criminals, terrorists, and illegal immigrants.\(^ {23}\) Visa-exempt passengers were not deemed similarly threatening, 

\(^{22}\) This finding accords with recent critical scholarship on the productive power of failure in the development of security tools. See Lisle (2018).

nor was their intensified surveillance seen as relevant to the broader goals of ‘combating terrorism and organized crime’ or ‘contributing towards returning illegal residents.’\textsuperscript{24} They were considered beyond the scope of the VIS, which as a result does not gather data on visa-exempt passengers. However, in the EES proposal of 2013, the lack of border surveillance on ‘all persons not subject to the visa requirement’ was identified as a severe shortcoming of existing systems, which the Commission argued could be overcome by establishing an EES to electronically monitor the entry and exit of all third country nationals.\textsuperscript{25} Just three years later, however, the Commission argued that even the combination of the VIS and EES still suffered from the shortcoming that ‘the competent border and law enforcement authorities have little information on visa-exempt third country nationals as regards risks they may pose before their arrival at the Schengen border.’\textsuperscript{26}

What is the basis for this rapid reconceptualization of legitimate scope limitations as shortcomings? It is technical. The technical logic underlying ‘smart borders’ is that of big data analytics. The development of new digital technologies has brought with it the rise of ‘Big Data’ through ‘an expansion in what can be rendered as data, or “datafication,”’ and an extension of the capacity to analyze across heterogeneous data forms.\textsuperscript{27} The proliferation of ‘smart border’ technologies directly mirrors both these developments. First, previously non-digital information such as biological characteristics and information given during face-to-face interactions with border guards are datafied through the centralized biometric database of EES and the digital online application of the ETIAS. Second, previous boundaries of relevance, necessity, and proportionality in terms of data categories are being eroded due to the perceived importance of analyzing across categories of data, reflected in both the algorithmic risk assessment of ETIAS and the interconnection of previously distinct systems through the Interoperability Framework.

\textsuperscript{24} European Commission (2004: 2).
\textsuperscript{25} European Commission (2013c: 3).
\textsuperscript{26} European Commission (2016b: 2). Emphasis added.
\textsuperscript{27} Amoore & Piotukh (2016: 3).
The logic of big data analytics expands the boundaries of data collection by assuming that disparate data can be assembled not only to accurately describe past events, but also to create ‘preemptive and anticipatory security knowledge’ that can be used to prevent future threats.28 Previous failures simply justify more expansive data collection due to a technical logic which assumes the possibility of accurately predicting future behavior, and thereby inevitably reconceptualizes past failures as arising from a lack of data. Comments by Commission officials directly reflected this logic of big data analytics:

[The IF aims to close] gaps, where people looked and we had information there, and we had information there, but we were not able to link it, so we were in the blind.29

Meanwhile, an EDPS official critical of this logic worried that:

No systems are ever shut down as unnecessary. I have never seen that […] In the future, the direction will be more and more data.30

In fact, even officials within the Commission became uneasy when asked about potential future developments, feeling that increasing surveillance was inevitable:

[Due to the proliferation of these systems] there is, of course, pressure to do similar things to Europeans. So that we have a better view of what’s happening within the Schengen zone. […] For me, that’s one step too many […] It’s extremely sensitive, of course, but I think it will come. It will come.31

This suggests that although the initial creation of EU-wide large-scale information systems was the result of intentional actions by the Commission, the proliferation of ‘smart border’ technologies partly arises from a technical imperative of the systems themselves. This technical imperative causes the reconceptualization of legitimate scope limitations into shortcomings, in turn galvanizing the Commission to act upon them in order to more closely approximate the ideal of data-driven

29 Interview with European Commission senior official, COM-6.
30 Interview with EDPS official, EDPS-1.
31 Interview with European Commission senior official, COM-6.
analytics, that is, to gather more and more data. Importantly, the proliferation of systems and increasingly expansive data-gathering were unforeseen by the Commission at the inception of ‘smart borders.’ This demonstrates the independent causal impact of the technologies, even if human agents were responsible for their initial creation. In the words of influential computer scientist Alan Turing:

If we give the machine a program which results in its doing something interesting which we had not anticipated, I should be inclined to say that the machine had originated something, rather than to claim its behavior was implicit in the program, and therefore that the originality lies entirely with us.\(^{32}\)

That said, technical imperatives are not able to completely determine outcomes. In line with the discussion in Chapter 1, the claim here is rather that these technologies are biased towards expansive data-collection. However, they are also ambiguous in that their development and deployment is also shaped by political interests, contingency, and contestation. Indeed, technical imperatives have been taken up by human actors within the Commission to complete the positive feedback loop driving the proliferation of ‘smart borders.’

Assembling Technical Expertise: Translation, Securitization, and Black-Boxing

The first step taken by the Commission resulting in the proliferation of ‘smart borders’ has been the translation of shortcomings into ‘information gaps.’ The concept of translation, as it is deployed in the ANT literature, is useful for conceptualizing this step in the feedback loop as it highlights that translation does not simply mean a shift in vocabularies or registers.\(^{33}\) Although translation is used by actors to claim that two things are equivalent, it also involves ‘displacement, drift,

invention, mediation, the creation of a link that did not exist before. In other words, ‘translation is both about making equivalent, and about shifting.’

This translation was already apparent in the interviews quoted above: limitations of existing systems are routinely described by Commission officials as ‘information gaps.’ While ‘limitations’ could be (and originally were) understood as legitimate scope conditions, the notion of ‘information gap’ has carried with it negative connotations from the outset, and implied that such ‘gaps’ should be closed. This mechanism of translation is very recent, yet one which has become ubiquitous in Commission parlance, emerging as a key justification for all recent ‘smart border’ technologies. No mention of ‘gaps’ in information and data collection was made by the Commission in any of its main documents on ‘smart borders’ in 2002, 2008, or 2011. The earliest mention of ‘information gaps’ came in 2013, when the Commission framed the limitations of the VIS as ‘an information and verification gap concerning third country nationals.’ Similarly, the ETIAS proposal explicitly states that this system is part of a broader Commission initiative of ‘developing new and complementary [information systems] to address still existing information gaps.’

The culmination of the drive towards more data—that is, more surveillance—has been the Interoperability Framework (IF). The IF, in short, would allow for information exchange between all EU-wide information systems, including the SIS II, VIS, Eurodac, EES, ETIAS, the European Criminal Record Information System for third country nationals, Interpol’s SLTD and TDAWN databases, and potentially the PNR and Advanced Passenger Information systems later on. The Commission is aware of the potential Orwellian connotations of this proposal: ‘There’s a lot of

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39 SLTD = Stolen and Lost Travel Documents; TDAWN = Travel Documents Associated with Notices.
fear, of course, because it sounds like Big Brother.\textsuperscript{40} Addressing ‘information gaps’ is the central justification of the IF. It supposedly eliminates such ‘gaps’ by both unlocking the full potential of existing systems and ‘address[ing] information gaps by establishing new information systems,’ envisaged to fall under the scope of IF from the outset.\textsuperscript{41} A Commission official explained:

\begin{quote}
It really provides reliability of the systems, and the elimination of information gaps that exist today.\textsuperscript{42}
\end{quote}

Importantly, translating limitations into ‘information gaps’ provides the Commission with the authority—due to its previously consolidated position as the actor responsible for issues relating to centralized information exchange—to determine the meaning of these ‘information gaps.’

This leads to the next step in the feedback loop, which has been the securitization of ‘information gaps.’ Once limitations of prior systems have been translated into ‘information gaps,’ moving them within the legitimate competences of the Commission in the eyes of Member States, the Commission has framed these ‘gaps’ in line with the other source of its legitimacy: the securitization of migration at the EU level. We saw above how the securitization of migration has consciously been used by the Commission to expand its competences. In order to justify the proliferation of security-oriented systems which focus on ever-expansive data collection, ‘information gaps’ regarding migrants have gradually become a more specific target of securitization. The Commission’s references to these ‘gaps’ relating to migrants is far from neutral; closing them is seen to ‘contribute to the apprehension of terrorist and criminal suspects.’\textsuperscript{43} The securitization of ‘information gaps’ has become so entrenched in the Commission that no longer is linking a lack of information to past or potential security emergencies even required; the ‘information gap’ is itself already threatening. In its 2016 communication on information systems for

\begin{flushright}
\textsuperscript{40} Interview with European Commission senior official, COM-6. \\
\textsuperscript{41} European Commission (2017: 11). \\
\textsuperscript{42} Interview with European Commission official, COM-10. \\
\textsuperscript{43} European Commission (2013c: 25).
\end{flushright}
border control, the ‘information gap’ is occasionally simply referred to as a ‘security gap.’\textsuperscript{44}

Elsewhere the Commission states that ‘fragmentation at both national and EU levels risks to leave dangerous security gaps.’\textsuperscript{45} This understanding is echoed by officials in the Commission:

\begin{quote}
[By allowing migration without extensive surveillance] you are opening big security gap in European Union. Because you don’t know who these people are. [...] You don’t know anything. This is why border management is not administrative task but a law enforcement task, a heavy law enforcement task.\textsuperscript{46}
\end{quote}

Of course, the interpretation of ‘information gaps’ as dangerous can be contested. Indeed, officials within the EDPS are extremely critical of the risk assessment algorithms of ETIAS, calling into question whether such data-gathering efforts are necessary and effective in combating security threats:

\begin{quote}
The ETIAS is the most useless system they are building [...] There is really no reason for gathering all this data, and no proper justification for profiling [via the risk assessment algorithm].\textsuperscript{47}
\end{quote}

Moreover, one can challenge not only the effectiveness and accuracy of data-driven systems in successfully pre-empting security threats, but also the objectivity of the mathematical basis of risk calculations itself. As Louise Amoore, drawing on Ludwig Wittgenstein’s philosophy of mathematics, has noted:

\begin{quote}
To open the critique at the sight of the number itself, though, is to miss an important locus of the politics of contemporary calculation [...] For Wittgenstein, mathematics is part of the apparatus of language; it is a grammar that makes some propositions sayable and silences others.\textsuperscript{48}
\end{quote}

In other words, the very assumption that linkages between highly disparate data categories can be combined to produce insights relevant to ‘enhancing security’ is itself political. Why, then, have the

\textsuperscript{44} European Commission (2016d: 7).
\textsuperscript{46} Interview with European Commission official, COM-11.
\textsuperscript{47} Interview with EDPS official, EDPS-1.
\textsuperscript{48} Amoore (2014: 430, 432).
Commission’s claims regarding the calculability of security threats from disparate datasets not been more effectively challenged, on either empirical or epistemological grounds?

This lack of extensive interrogation is explained by the third step taken by the Commission: *black-boxing*. This mechanism refers to attempts by actors within an actor-network to transform a set of objects, practices, propositions, and social relations into a single ‘technical object,’ which, ‘although its existence may once have been controversial, or patently uncertain, it can now be taken for granted and used unproblematically by others as a sort of reliable building block in their projects and quotidian activities.’ Black-boxing has been apparent in the Commission’s development of all recent ‘smart border’ systems, as it has represented their multiple technical and social components as necessary building blocks which, in line with the expectations of ANT, ‘no longer need to be reconsidered.’

For instance, the complexities of a vast network of databases, automated border control gates, fingerprint scanners, biometric facial imaging techniques, border guards, and travelers have been black-boxed by referring to this network simply as ‘the EES.’ Of course, any policy solution, technical or not, will inevitably consist of multiple components and thereby merit the use of a broader term which refers to the policy as a whole. However, describing the EES as a black box is apt due to the extent to which the Commission has glossed over potential controversies and weaknesses by referring to ‘the EES’ as a unified technical object in later justifications for the ETIAS and IF. Even before the EES Regulation had been finalized, its potentially controversial components were transformed into necessary building blocks for establishing the ETIAS, which the Commission argued was based on ‘the re-use of components developed for [other EU-wide] systems, the EES in particular.’ Potential issues included the questionable reliability of biometric matching particularly at the scale of the EES database, potential difficulties and delays in

49 Walters (2002: 100).
52 Privacy International (2017: 11-12).
passenger enrolment,\textsuperscript{53} and rights concerns regarding large-scale biometric enrolment and data retention.\textsuperscript{54} By designing an ETIAS based on the EES as a necessary component, the Commission effectively black-boxed the potentially controversial aspects of the EES, which the Council and Parliament would be unlikely to excessively interrogate during discussions about the ETIAS. A Commission official recounted that once a broad agreement had been reached on establishing an EES, the Commission recognized the low likelihood of the Council and Parliament revisiting its technical makeup in discussions regarding the ETIAS:

"The Entry-Exit is approved […] The institutions, [the] Council and Parliament, they do not like restarting the discussion again, they say "yes indeed, we take the consequences of our decision, that’s fine." […] In the case of the Entry-Exit System, both institutions did their utmost to move on with things.\textsuperscript{55}"

The ETIAS provides another interesting example of black-boxing and in fact adds another dimension to the meaning of this term. The Commission has downplayed highly controversial dimensions of the ETIAS, in particular its automated profiling algorithm, by focusing on its less controversial aspects such as cross-checking passenger information with criminal databases. In the 2016 ETIAS Proposal, the automated risk assessment algorithm is mentioned only in passing, yet multiple pages are dedicated to outlining the process of cross-checking passenger data with existing EU-wide databases.\textsuperscript{56} However, both the European Parliament and the EDPS agree that once in operation, the profiling algorithm will constitute a significant and highly controversial component in the overall operation on the system.\textsuperscript{57} The Commission is well aware that the risk profiling component is the most controversial aspect of the ETIAS, and has worked hard to downplay its significance:

\textsuperscript{53} European Parliament (2016: 18).
\textsuperscript{54} European Data Protection Supervisor (2016: 7).
\textsuperscript{55} Interview with European Commission official, COM-8.
\textsuperscript{56} European Commission (2016b: 8-10).
\textsuperscript{57} European Parliament (2017: 23-28); European Data Protection Supervisor (2017).
Commission senior official: [Members of the European Parliament] fear that it would lead to racial or ethnic profiling.

Researcher: Do you think that’s a legitimate concern?

Commission senior official: Well, it’s legitimate, but it’s what policemen do. Let’s be honest.\textsuperscript{58}

In addition to downplaying its significance, the Commission also wanted to avoid using the term ‘profiling’ in favor of more euphemistic terms such as ‘screening.’\textsuperscript{59} Indeed, a senior Commission official was surprised to hear that the term ‘profiling’ had made it into the final ETIAS Regulation:

Researcher: Was the use of an automated profiling mechanism controversial in discussions with the Parliament?

Commission senior official: Yeah. We don’t call it profiling, of course.

Researcher: I think the term ‘profiling’ is mentioned in the latest legal text.

Commission senior official: It’s the screening mechanism… Profiling is in the text? The legal text?\textsuperscript{60}

In addition to the Commission’s deliberate attempts at black-boxing the ETIAS as a whole, the automated risk assessment algorithm constitutes a technical black-box as well. Once the algorithm is set up, ‘updates in the database can be analyzed and incorporated automatically.’\textsuperscript{61} In other words, the ETIAS profiling algorithm will profile passengers according to real-time, fluid information analysis, whereby ‘it creates only momentary groupings that might be disappearing back into the white noise of the database in the next moment.’\textsuperscript{62} This means that human operators of the ETIAS will not know on what basis the profiling algorithm denies travel authorization or flags individuals for manual analysis:

Researcher: How transparent is the system in highlighting the reason behind the refusal?

Commission official: It will not [inform the passenger]. If the automatic system says no, then that’s the end of the story.

\textsuperscript{58} Interview with European Commission senior official, COM-12.
\textsuperscript{59} European Commission (2016b: 53).
\textsuperscript{60} Interview with European Commission senior official, COM-12.
\textsuperscript{61} Leese (2014: 503).
\textsuperscript{62} Ibid.
Researcher: And with flagged applications, the official that processes them, they will know the reasons [for the application being flagged]?

Commission official: No, they will not.63

The EDPS criticized this aspect of the profiling algorithm, arguing that it would undermine the right to an effective legal remedy in cases where individuals are wrongly blacklisted. The EDPS argued that in order for legal remedies to be effective, the applicants as well as the Member States ‘would have to be able to know and understand the rationale behind the risks’ recognition.64 An official from the EDPS criticized the fact that: ‘There will be no way of rebutting the system, because they do not know how it works.’65

The above findings suggest that black-boxing has been deliberately deployed by the Commission to reduce the extent of interrogation and political contestation it faces when presenting ‘smart borders’ proposals to the Council and the European Parliament. Furthermore, yet beyond the scope of this thesis, the black-boxed nature of the automated profiling algorithm of the ETIAS suggests that in the future, black-boxing might arise not only from intentional action by human agents; it might also become another technical imperative exerting its causal impact on the policymaking process.

The result of the successive translation, securitization, and black-boxing by the Commission is that the final link in the policymaking process, which would ideally consist of political negotiations based on evidence, oversight, and safeguards, in fact consists of only limited contestation not often backed by evidence or characterized by due safeguards or oversight. Successful translation, securitization, and black-boxing have all served to strengthen the autonomy of the Commission by weakening opportunities for meaningful political contestation in the later stages of the policymaking process.

63 Interview with European Commission official, COM-2.
64 European Data Protection Supervisor (2017: 11).
65 Interview with EDPS official, EDPS-1.
This is not to say that there are no constraints on Commission action, or that the continued proliferation of intrusive surveillance systems cannot be challenged in the future. Indeed, the inclusion of the term ‘profiling’ in the ETIAS Regulation represents a partial opening up of the ETIAS black box due to extensive criticism by the EDPS and the European Parliament.\textsuperscript{66} This is in accordance with the characterization in ANT of black-boxing as a political process which can be more or less successful, depending on ‘political disputes and administrative difficulties.’\textsuperscript{67} Despite the eventual inclusion of ‘profiling’ in the legal text, however, the Commission’s black-boxing of ETIAS did ensure that the profiling mechanism was never discarded. In fact, it allowed the Commission to present the inclusion of the term ‘profiling’ in the legal text as a concession, although no substantive changes were made to the actual profiling mechanism. Nonetheless, although the ETIAS is a product of the positive feedback loop of proliferating ‘smart borders’ in the EU, this minor concession does highlight the political and therefore contingent nature of technological momentum. Although technical imperatives, translation, securitization, and black-boxing explain the ascendancy and proliferation of ‘smart borders’ in the EU, this feedback loop can be challenged at any one of its stages. That said, the proliferation of ‘smart borders’ demonstrates the power of this feedback loop, in accordance with the theoretical proposition that once sociotechnical systems such as ‘smart borders’ gain technological momentum, they will become increasingly difficult to challenge or subvert.

\textbf{Conclusion}

This chapter constructed a novel framework for explaining the proliferation of ‘smart borders’ in the EU. It conceptualized ‘smart borders’ as sociotechnical systems subject to technological

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\textsuperscript{66} European Union (2018: Article 33(1)).
\textsuperscript{67} Walters (2002: 100).
\end{flushleft}
momentum. This momentum constitutes a positive feedback loop driving the proliferation of large-scale information systems used for border security and migration control in the EU.

Empirical evidence gathered via document analysis and elite interviews supports these claims. Moreover, this framework captures the independent effects of technologies themselves in tilting the scales towards ever-expansive surveillance technologies, while simultaneously highlighting the role of human agency in completing the positive feedback loop and determining its ultimate characteristics. What emerged is a framework better able to account for the causal mechanisms, driven by both humans and nonhumans, that have produced and reproduced ‘smart borders’ in the European Union since 2001.
Conclusion

Any fact becomes important when it’s connected to another. The connection changes the perspective; it leads you to think that every detail of the world, every voice, every word written or spoken has more than its literal meaning, that it tells us of a Secret. The rule is simple: Suspect, only suspect.

– Umberto Eco, 1989

This thesis has explained how ‘smart borders’ have ascended to their current position as preferred policy tool for border management in the EU since 2001, and moreover why they have proliferated despite the lack of empirical evidence to demonstrate their necessity or usefulness. Chapter 1 constructed a theoretical framework according to which ‘smart borders’ were understood as sociotechnical systems, which might in time gather technological momentum. Chapter 2 then showed that migration was securitized at the EU level during a critical juncture between 1992-1997, and thereafter became subject to path dependence. Chapter 3 challenged the traditional account of security policy formation by assessing the empirical evidence underlying the ‘smart borders’ proposals. An alternative framework was constructed in Chapter 4, which demonstrates that the ascendancy and proliferation of ‘smart borders’ can be explained as the result of a positive feedback loop of technological momentum, driven by technical imperatives, translation, securitization, black-boxing, and limited political contestation. This conclusion outlines the theoretical and empirical contributions of this thesis, highlights some normative implications of the findings, and provides concluding remarks.

Academic Contribution

Three key contributions emerged from the analysis above. First, by drawing on existing scholarship as well as original analysis of official EU documentation, Chapter 2 provided an empirical account

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of the previously underexamined role of the European Commission in securitizing migration in Europe during the 1990s. It highlighted the contingency, unexpectedness, and strategic nature of the Commission’s reframing of migration as a security issue. It also provided theoretical depth to existing scholarship, which has recognized that at Amsterdam ‘the conceptual parameters of the security paradigm which characterized the Third Pillar [came] to define the terms of the free movement of persons in Community law,’ but has not theorized why this happened or why desecuritization became less likely thereafter. The notions of critical junctures and path dependence, deployed in Chapter 2, provided answers to these questions.

Second, Chapters 3 and 4 provided a novel empirical account of the ascendency and proliferation of ‘smart borders.’ Although prior research has taken as a starting point the proliferation of these systems, describing it as part of a general trend towards more surveillance, a critical evaluation of their evidence basis and the policymaking process underlying their development was missing. The evidence basis was assessed in Chapter 3 and a novel framework for understanding the development of ‘smart borders’ was constructed in Chapter 4. Moreover, the findings of those chapters were based on interviews with elites directly responsible for the creation of these systems. These interview findings provide important original evidence of the intentions and awareness of Commission officials, which in existing scholarship have mainly been inferred indirectly from official documents or public debates. Elite interviews have been an underutilized resource in critical security studies despite their immense value; this thesis has taken steps to correct this shortcoming.

Third, this thesis generated theoretical insights for understanding the role of technical objects in security policy formation. It mediated between previously dichotomous understandings of the relationship between materiality and social structures. The framework constructed in Chapter 4 demonstrates how both nonhuman and human actors gave rise to important causal

mechanisms impacting the policymaking process. Highlighting the independent role of technical imperatives separates the framework constructed in this thesis from the simple constructivist assertion that ‘rump materiality’ also matters for political outcomes by providing the material conditions of possibility for human action. It demonstrates that not only do material objects permit human agency, they can also shape human understanding and action in ways that are unforeseen and unintended, even by the creators of new technologies themselves. Yet it does not suggest that materiality wholly determines human action, as the notion of the sociotechnical system highlighted the importance of human agency within the feedback loop as well. It is this mediation between materiality and subjectivity, and the explication of human and nonhuman causal mechanisms, which constitutes the theory-generative contribution of this thesis.

The Normative Implications of ‘Smart Borders’

Biometric identification systems are becoming increasingly widespread in both public and private contexts, despite the still questionable reliability of these technologies.\(^3\) In the context of border controls and law enforcement, for which the EES biometric database will be used, the potential impacts of false positives can be highly significant for the individual—including travel bans and blacklisting—yet existing research has already uncovered a ‘negligent attitude toward false positives’ in the context of security practices.\(^4\) Chapter 4 confirmed this concern, by demonstrating how the Commission has deliberately obscured the contestability of biometric technology and downplayed potential controversies by black-boxing the EES. Moreover, Chapter 3 also confirmed concerns related to ‘biometric function creep.’\(^5\) This notion refers to biometric technologies being initially intended for specific, often uncontroversial purposes, yet subsequently spreading into other areas of action. Chapter 3 demonstrated how in proposals for an EES from 2008-2016, biometrics

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\(^3\) Lohr (2018); Sharman (2018).
\(^4\) Muller (2010: 9); Leese (2014); Gates (2011).
\(^5\) Ajana (2013: 577).
were intended to be used for passenger facilitation and reliability of entry-exit matching, yet the 2017 Regulation viewed law enforcement as an important purpose and thereby provided law enforcement access to the EES database from the outset.

The model constructed in Chapter 4 provides an analytical framework for understanding another concerning observation regarding the development of security and surveillance technologies, namely that they seem to proliferate in spite of apparent failures, and moreover that their ‘failures’ often become reconceptualized as ‘successes’ which justify this proliferation. The positive feedback loop model explains these processes: technical imperatives of the systems are taken up by politically invested human agents, who are able to justify increasingly intrusive surveillance on the basis of previous shortcomings through mechanisms of translation, securitization, and black-boxing.

Another concern discussed in existing literature, and substantiated by the empirical findings of this thesis, is that the proliferation of surveillance systems used for border controls poses a challenge to individual rights and existing legal safeguards. Individual rights to private life, the protection of personal data, and non-discrimination are enshrined in Articles 7, 8, and 21 respectively of the Charter of Fundamental Rights of the European Union (CFR). Article 52 does provide the grounds for limiting these rights, yet explicitly states that any limitations must be based upon clear evidence of necessity and proportionality. Chapter 3 demonstrated the lack of evidence to justify intrusive data collection and retention, as well as potentially discriminatory algorithmic profiling as part of the latest ‘smart border’ technologies. Furthermore, Article 47 of the CFR enshrines the right to an effective legal remedy for all individuals suspecting their rights have been wrongfully violated. This right ensures accountability of practices which have long-reaching implications for the individuals objected to them. However, Chapter 4 demonstrated that the right

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7 Leese (2014); Dekkers et al. (2019).
8 European Union (2000).
to an effective legal remedy is undermined by the ETIAS algorithm, which will not provide a transparent account of the decisions it makes. The combination of nonhuman and human decision-making reinforces this problem, as travelers can be blacklisted either by the algorithm itself or by the humans operating the system. As Dekkers et al. recently noted in the context of another automated risk assessment system: ‘Because it is difficult to establish whether their actions were the result of a discretionary decision or an automated risk assessment, potential wrongful selection practices could be brushed aside by saying the officer’s actions were based on [the system].’

Finally, all of the aforementioned concerns are intensified by the increasing interconnections between the multiple EU-wide surveillance systems, culminating in the Interoperability Framework. Surveillance scholar Roger Clarke noted already in 1988 that one of the most important safeguards against intrusive surveillance and unaccountable profiling is the ‘dispersion of authority and power, and, hence, of information.’ The IF undermines this safeguard by creating a centralized network of interlinked surveillance systems. In a surprisingly candid remark, a Commission official referred to this web of systems as ‘a kind of mixture of Kafka and Orwell,’ which highlights the amalgamation of obscure justifications and accountability mechanisms together with a sense of pervasive surveillance.

**Future Outlook and Concluding Remarks**

‘Smart borders’ are based on, and further entrench, the assumption that migrants and refugees should be viewed as potential security threats, not due to past transgressions, but by virtue of their difference, which justifies a fear of their potential dangerousness in the future. The rule at the border is indeed simply to ‘suspect, only suspect,’ and to exclude those who are unable to prove their trustworthiness. This logic undermines the presumption of innocence and can have serious

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9 Dekkers et al. (2019: 248-249).
11 Interview with European Commission official, COM-4.
impacts on the lives of migrants and refugees, as suspicion itself is becoming criminalized through the explicit linking of these systems to law enforcement and pre-emptive flagging by a risk profiling algorithm.

Nonetheless, ‘smart borders’ and other intrusive surveillance systems are likely to proliferate in the near future. This thesis has described the powerful sociotechnical feedback loop which tilts the scales towards increasing surveillance at the border. Indeed, comments by Commission officials reflected a sense of inevitability of the future proliferation of surveillance systems, as seen in Chapter 4. That said, ‘in human affairs nothing is inevitable until it happens,’ and ultimately the feedback loop too is contingent and contestable. An important area for future research is uncovering where, when, and how the policymaking process could be made more transparent and accountable, in order to pave the way for effective political action. Moreover, given the diffuse nature of the development of cutting-edge surveillance technologies, specifying the relationship between private companies and public agencies in that process remains an important task. Finally, as the complete impact of these systems will only become apparent once they are fully operational, future research should examine how exactly ‘smart borders’ affect border control practices on the ground, and what impacts they have on migration control, security, justice, and the wellbeing of migrants and refugees.

Of course, technical imperatives and political interests resulting in the proliferation of ‘smart borders’ have not been entirely disconnected from the will of the people; indeed, the broader context of the politicization and securitization of migration in Europe demonstrates that there is popular support for new migration control measures. Yet, even if increased surveillance and exclusion of migrants is seen as desirable, it is worth asking on what evidential or political basis this judgement has been made, and whether the systems developed in response are necessary and proportionate. In other words, we should ask whether, on balance, these systems increase security

12 Sweezy quoted in Foster (2004).
or if they produce insecurity instead. What is more, the expansion of surveillance creates a widespread atmosphere of suspicion, which does not necessarily differentiate between groups singled out for surveillance and those whose privacy is to be respected. As demonstrated in this thesis, the boundaries of suspicion have already expanded from known criminals and terrorists, to visa-required immigrants, to all third country nationals. As a Commission official noted in Chapter 4, there are already pressures to introduce similar systems for European citizens as well. It seems that although highly politicized distinctions between ‘us’ and ‘them’ have formed an important justificatory basis for the introduction of ‘smart borders,’ these systems themselves do not necessarily respect such distinctions. We should thus recognize that the normative issues underpinning this topic affect not only migrants and refugees, but the rights and liberties of all. Whatever our attitudes towards migration, then, we should critically assess and evaluate novel border control and surveillance measures sooner rather than later.
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