## Balancing Fundamental Rights in the European Union's Border Security Ecosystem: A Focus on Security, Privacy and Data Protection

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In the modern day state system, founded as it is upon the principle of sovereignty, it is acknowledged that States holds an exclusive right to rule over their own territory. However, this in turn also creates rights and duties for the State – perhaps most importantly, the obligation to ensure the continued safety and security of those individuals who reside within the State. It has come to be recognised that the State border plays an important role in facilitating the State's ability to fulfil their security obligations, as this is the point where State authorities have the chance to interact with a Third Country National (TCN) and determine whether they might pose a threat to the continued security of the State. If they conclude that they do, then they can easily deny that TCN entry into the territory of the State.

However, following the development of the Schengen Area, this possibility has been fundamentally altered. As such, the territorial borders of the Schengen States have been separated into two categories — internal and external. In order to facilitate freedom of movement, the formalities involved in crossing an internal border have been massively lowered. As such, individuals are able to pass over these borders seamlessly, and largely without controls. However, it was quickly recognised that this might pose a threat to the security of the Schengen States, and as such, there was a comparable strengthening of the external borders. Consequently, those States who have an external border are expected to maintain a strong and effective border regime, as effectively they hold the responsibility for maintaining the security of the entire Schengen Area. Afterall, once a bad faith actor has been able to enter into the territory of the Schengen Area, they are free to move around without restriction, and consequently, could pose a threat to any of the Member States.

Protecting the borders of the Schengen Area therefore became, by necessity, collaborative. It was determined that in order to facilitate the protection of the external borders there needed to be away for the national authorities of the Member States to share information,

so as to enable the threat level of a TCN to be assessed, regardless of which Member State's border they attempted to cross. Over time, this desire has gradually resulted in the EU adopting a range of technological measures designed to monitor and control the movements of TCNs so as to enhance the protection of the EU's external border. However, increasingly these measures are predicated upon the collection, storage and processing of large amounts of personal data, which threatens the protection of a TCN's human rights, particularly the rights to privacy and data protection.

The core of this thesis therefore seeks to determine whether a method can be devised through which to determine how to proportionately balance these competing obligations, so as to ensure the continued security of the EU's territory while also protecting and promoting the human rights of the TCNs present within the EU's border sphere. In doing so, this thesis will turn to the concept of the ecosystem for guidance. Originally conceptualised within the ecological sciences, the ecosystem concept sought to provide a method through which to better understand the connections which exist between the living and non-living organisms in a particular geographical area at a certain point in time. This research, however, divests the concept from its ecological roots and distils it into three central characteristics - 1) interconnections, 2) interactions and 3) non-living elements. In doing so, this thesis proposes that the ecosystem concept, particularly when thought of through these three characteristics, can provide a useful framework through which to develop a new method for analysing intricate and complex situations – in particular, those which involve a number of competing interests and a range of actors. Ultimately, this thesis seeks to encourage the development of a more holistic approach to balancing competing interests, such as the promotion of human rights and the protection of security.

By conceptualising situations through the lens of an ecosystem, it becomes possible to more clearly understand how intricately woven the division of responsibilities for protecting complex interests, such as border security, are. Often the roles of different actors, with different prerogatives, competences and responsibilities, will overlap and intersect, requiring these actors to work together in order to achieve their goals. Consequently, the ecosystem concept proves particularly useful due to its ability to illustrate how these actors can be interconnected and whose roles often require them to interact with each other. As a result,

it becomes particularly important to consider these groups of actors, not only as individuals, but also as constituent parts of the wider system of actors working within the border security field. Within ecology, it is now tacitly acknowledged that an ecosystem can only be properly understood by looking at the system as a whole, rather than focusing on each of the parts individually. Similarly, the interconnections which exist between the different actors in the European border security field must also be acknowledged, as these can play an important role – not only in relation to the actions taken by each actor, but also in the political choices pursued at a national, regional and international level. Each of these actors do not act in their own individual bubble, but rather operate within a broader border security 'ecosystem'.

In acknowledging that each of these actors cannot be analysed individually, but rather must be considered holistically, it allows a more balanced approach to be taken in areas where competing interests come to the fore. Within the border sphere, these concerns often relate to how to guarantee and protect the human rights of migrants, while at the same time effectively protecting the security of the Member States through strong and efficient border controls. As will be explored throughout this thesis, it has become clear that over the past few decades, TCNs have increasingly come to be perceived as a threat to the security of not only the individual Member States, but also the entirety of the EU. This belief has led to the introduction of six large-scale IT databases within the fields of migration and security through which information on different categories of TCNs can be collected, stored and exchanged. In addition, the recent decision to introduce interoperability between these databases has allowed these systems to become bound together, forming an ecosystem for information exchange. This ecosystem enables the various actors within each of the Member States to work together in order to ensure the continued security of the Union's territory, and the territory of their own State.

As is the case with any measure permitting the collection of large quantities of personal information, questions can be raised from a human rights standpoint, particularly with regards to whether this measure complies with the requirements established under the rights to privacy and data protection. As human rights are afforded to everyone, not only those who are citizens of the EU, it is important that any measure adopted in pursuit of security, such as the development of these large-scale databases or the introduction of interoperability, is as

limited and constrained as possible, so as to ensure that the rights of TCNs are not unjustly infringed.

By applying a holistic approach, not only is it easier to conceptualise how various security actors are bound together, but also how the TCN might be affected by these connections. Consequently, the introduction of a new security measure, such as interoperability, should not be looked at in isolation, but rather must be considered within the wider framework of security measures already in operation. By conceptualising the situation more broadly, it allows deeper consideration to be given to the question of whether the introduction of these new measures is necessary and proportionate.

This thesis will therefore focus on the six large-scale IT databases which have been developed within the EU's migration and security field, those being:

- The Schengen Information System (SIS);
- The Visa Information System (VIS);
- The European Asylum Dactyloscopy (Eurodac);
- The Entry-Exit System (EES);
- The European Travel Information and Authorisation System (ETIAS); and
- The European Criminal Records Information System Third Country Nationals (ECRISTON).

In addition, it will consider how through the introduction of two new EU Regulations – Regulation 2019/817 and Regulation 2019/818 – the EU has sought to develop a framework through which to implement interoperability between these databases.

Inspired by the ecosystem concept, this thesis will therefore seek to promote the adoption of a more holistic perspective. Rather than looking at each of these systems in isolation, this thesis will consider their place within the wider context of the competing obligations held by the EU's border security actors. In particular, it will seek to consider not only the security considerations which underlie the adoption of each of these databases, and which have motivated the desire to introduce interoperability between them, but also what effect these developments have had on the human rights of TCNs in the border sphere. The introduction

of interoperability, in particular, needs to be considered from both a security and a human rights standpoint, as while taking into account the fact that this move is beneficial from the perspective of simplifying data exchange, it is also likely to raise significant human rights concerns in regards to privacy, data protection and non-discrimination. Adopting a wider perspective is essential if legislators and security actors truly wish to balance the pursuit of security with the protection of human rights. In contrast, failing to do so only increases the potential that the development and introduction of new security measures might be prioritised at the expense of the human rights of migrants. In order to establish a environment which is capable of both promoting the protection of human rights and maintaining an effective security regime, what should be sought is the achievement of a proportionate balance, in particular, one which takes into account the needs of both security professionals and the human rights of the individual. As analysis of the Interoperability Regulations, and in particular, how they been used in order to facilitate the development of an ecosystem for information exchange between the six large-scale IT databases established within the EU's migration and security fields, shall therefore be conducted. In doing so, a holistic approach shall be applied in order to determine whether it can be said that the EU has managed to proportionately balance the needs of security actors with the protection of the rights of the TCNs affected by these Regulations.

This thesis will seek to answer the following central research question:

Can the use of the ecological concept of the ecosystem enable the development of a framework capable of taking into account both the needs of security actors and the protection of the human rights of TCNs in the border sphere when conducting a fundamental rights analysis of the use of personal data in the EU's border security ecosystem?

Chapter Two considers the issue of border security within Europe, and specifically within the EU. It reflects on the important role borders play in relation to the sovereignty of the State, and consequently, examines why the protection of a State's border is considered such an important prerogative. It also considers the specific context of the EU, and in particular, examines how the development of the Schengen Area has led to the realisation that the national authorities of the Member States need to work together in order to ensure the

protection of the EU's territory. In doing so, it seeks to show how the act of migration has become increasingly securitised within the EU, before conducing an analysis of recent terrorist attacks within Europe in order to determine whether there is any justification for the growing perception that migrants represent a security threat.

Chapter Three seeks to consider how to balance the responsibility of maintaining security within the EU's territory with the need to protect the human rights of TCNs, specifically their rights to privacy and data protection. This Chapter therefore begins by introducing the concept of privacy, focusing on how it has gained legal protection as a human right within Europe; before distinguishing it from the right to data protection. It then acknowledges how the non-absolute nature of privacy enables it to be limited in certain circumstances, such as when the interference can be considered to be in accordance with law, pursues a legitimate aim, and is necessary in a democratic society. In order to determine whether an interference can be considered to be necessary in a democratic society, it is often required to conduct a proportionality assessment – whereby the rights of the individual are balanced against those of the wider community. However, proportionality assessments generally only consider the impact of one privacy-invasive measure on an individual's rights. However, increasingly we are faced with a situation where an individual's right to privacy can be threatened not only by a single measure, but rather by multiple measures. As such, it is important to develop a method which is not only capable of considering multiple measures, but which is also capable of assessing what the cumulative effect of these interferences might be. As such, this Chapter proposes that a holistic approach based upon the ecological concept of an ecosystem should be developed.

Chapter Four introduces the concept of the ecosystem as it was originally developed within the field of ecology. It then seeks to consider whether this concept can be utilised in order to encourage the development of a more holistic approach when it comes to analysing complex security environments, such as border security, which require competing interests, such as the promotion of human rights and the protection of security, to be balanced against each other. As such, this Chapter also acknowledges how recent technological developments within the EU's border security field make it a good location to test whether the concept of the ecosystem can be used in order to develop a framework through which the cumulative

effect of multiple privacy-invasive measures can be acknowledged and assessed in order to determine whether they comply with the principle of proportionality. In particular, it also seeks to consider how an individual's human rights might be affected by the failure to acknowledge the interconnected nature of these security measures.

Chapter Five attempts to map out how the EU has constructed an ecosystem for information exchange within the border security field. This ecosystem, which is based upon the creation of a number of large-scale IT databases within the spheres of migration and security, enables the collection and exchange of personal data relating to the different categories of TCNs found within the EU's border sphere. This Chapter will firstly analyse the three databases which are currently in operation, tracing how they have been updated, amended and extended in the time since their establishment; before moving on to consider how new databases such as the three which are still under development have been conceptualised and developed. Finally, it will examine how the introduction of interoperability has resulted in these systems becoming tied together into an ecosystem for information exchange.

Chapter Six seeks to considers how personal data can be safeguarded within this ecosystem for information exchange which has developed within the EU's border security sphere. As such, it begins by considering how the right to data protection has developed over time, and what is looks like now in 2024. It then goes on to consider how the field of border security within the EU has been transformed through the introduction of these large-scale IT databases which are dependent on the collection of a vast range of personal information. In particular, it analyses what personal data is collected by each system, before seeking to establish whether there are sufficient safeguards in place to protect the personal data which is captured and contained within these databases. In particular, an analysis of the two main data protection frameworks (GDPR and LED) which are applicable to this interoperable information ecosystem is conducted, in order to highlight how diverging data protection rules can result in differing levels of protection for the data subject depending on who is processing their data.

Chapter Seven seeks to assess how the introduction of interoperability between the six largescale IT databases in operation within the EU's migration and security field has affected the human rights of those TCNs whose data is contained within these systems. In particular, it will seek to assess whether the interference caused to their right to privacy and their right to data protection can be considered as proportionate. In doing so, a holistic approach shall be applied, whereby the Interoperability Regulations will not be looked at in isolation, but rather within the wider security context within which they will operate – i.e. the EU's border security ecosystem. This Chapter therefore seeks to assess whether the introduction of interoperability can be said to proportionately balance the competing human rights interests which arise within the EU's border security sphere – primarily, ensuring the security of those residing within the territory of the EU's Member States while also protecting the human rights of migrants in the border area.

Chapter Eight concludes the thesis, by summarising the main findings of this research and providing an answer to the central research question.