Challenges of Aviation Security Regulation in Norway Post 9/11

by

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SUMMARY

The 9/11 terrorist attacks in the USA had wide-ranging consequences for security issues in Western societies. Within civil aviation, the attacks became grim evidence that the security system constructed to prevent intentional attacks was deficient. In Europe, the European Union took on the responsibility to gather European civil aviation security under one banner, relieving the EU members' national legislation on aviation security, uniting it through implementing one common supranational regulation for all EU countries.

As a non-EU member, Norway was obligated by the European Economic Area Agreement (EEA Agreement) to implement the same regulations as the EU countries to avoid being banned from the One-Stop Security regime that had been in effect prior to the 9/11 attacks. The bearing principle in the One-Stop Security regime is that any passenger who is security screened at any entry point within the system will forego any new screenings whilst travelling within the system. Therefore, every airport participating in this system must, regardless of size, implement measures that ensure that the EU regulative level is maintained at the same predefined level. In order to achieve this, a highly prescriptive regulation was developed, based on main documents from the International Civil Aviation Organisation (ICAO) that had previously been applied as guiding documents for the national civil aviation regulations and legislation. These documents had previously provided recommendations that each country was only obliged to report deviations from, but after 9/11 these became mandatory in the new EU regulation.

This thesis aims at describing the consequences of this regulatory transition by investigating the following research problem: *"What are the consequences of implementing EU security regulation in the Norwegian civil aviation system?"*

The main aim is, thus, to discover possible consequences of the regulatory system instated post 9/11, both on the authority and airport levels, connecting regulatory types to organisational challenges.

In order to study these issues, a charting of the Norwegian civil aviation system and the regulatory landscape was performed by interviewing the main actors and authorities within Norwegian civil aviation. Thereafter, fieldworks were conducted at three different sized airports. In addition, to understand the findings of the Norwegian implementation, a comparative case was made by

conducting interviews with key actors in the Icelandic civil aviation system. This comparison was intriguing since Iceland, like Norway, is obligated through the EEA Agreement, yet Iceland chose a different implementation than Norway.

Airport security can be defined as a High Reliability Organisation (HRO), as defined by Weick et al. (Weick, Sutcliffe, & Obstfeld, 1999, p. 90). These are organisations that operate in a highly unforgiving environment which, in case of errors, has the potential for disastrous outcomes. As security is threatened by different kinds of risks than those with which HRO theory and literature normally have been occupied, I argue that this has less importance when the purpose is to investigate which factors produce reliable outcomes in organisations, regardless of whether the threats are intentionally caused (security) or accidentally caused (safety). Thus, studies on security can be profitably incorporated into the vast literature on organisational safety and reliability.

The findings from this study reveal a high degree of constraint at the airport level, both among leaders and employees, caused by the construction of the security regulation and its implementation. Possibilities for action, through influence and involvement in regulatory processes, decreased exponentially with the increase in details and prescription after 9/11.

Possibilities for action, or 'space for action' as it has been labelled in this thesis, is what facilitates the organisation to adapt and adjust regulation into the context. Seen in relation to HRO principles, limited possibilities for action may lead to mindlessness and, thus, threaten the overall reliability in an organisation.

Consequences will necessarily follow a groundbreaking event like what occurred on 9/11. Not only did the security system demonstrate its limitations, but the symbolic value was also high. Consequently, this will affect people's perception of the trustworthiness of the system. Authoritative action will be essential, and speed will demonstrate vigour. The regulatory work inaugurated in the hours following the terrorist act on 9/11 has unquestionably heightened the security level for civil aviation. However, more than a decade later, it is possible to explore the transition in hindsight to see its consequences in the actual context of the airport.

CONTENTS

LIST OF ACRONYMS AND ABBREVIATIONS

AVSEC	Aviation Security
BSL	Regulations for Civil Aviation
CAA	Civil Aviation Authority
CSRA	Critical part of Security Restricted Area
ECAC	European Civil Aviation Conference
ECSC	European Coal and Steel Company
EEA	European Economic Area
EEC	European Economic Community
EFTA	European Free Trade Association
ESA	EFTA Surveillance Authority
EU/EC	European Union/European Community (EU's first name)
Euratom	European Atomic Energy Community
HRT/O	High Reliability Theory/Organisation
ICAO	International Civil Aviation Organisation
MTC	Ministry of Transport and Communications
NOK	Norwegian Kroner
PAA	Public Administration Act
PRIO	Peace Research Institute Oslo
SARPs	Standards and Recommended Practices
SLA	Service Level Agreement
TIP	Threat Image Projection
UIS	University of Stavanger

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1 INTRODUCTION

What if 9/11 had never happened? What if the four hijacked aircraft had not been applied as weapons to create maximum collateral damage? What would this mean for civil aviation, not only in the US where the attacks took place, but also for the rest of the world? Asking these counterfactual questions at the beginning of this thesis reflects the profound impact 9/11 had for civil aviation and civil aviation security. Although there are no single or simple answers to these questions, it is reasonable to assume that the rapid, comprehensive, and extensive transformation that aviation security went through in the aftermath of the attacks would have developed differently. Aviation accidents, such as air crashes or engine fires, which are often both dramatic and lethal, are well known within civil aviation. While these certainly cause fear and anxiety for future passengers, terrorism acts, which are intentional and wilfully carried out, are created to cause fear. That the attacks were successfully accomplished demonstrated the system's vulnerability, a vulnerability that demanded immediate action. When there is a need for immediate action, evolution and development of rules and regulations take different paths from those that are not steered by an event or a catastrophe. Choices must be taken rapidly, amendments must be made and time-consuming assessments and evaluations must give way to other priorities. The effects and consequences of such choices will only be possible to analyse after the dust has settled. The main aim of this thesis is to explore some of the choices that were made regarding aviation security regulation in Europe post 9/11, as seen in the Norwegian context, and the consequences the regulation has had for the organisation of aviation security in Norway.

In the following part of this introductory chapter, I introduce the field and aviation security's reason and rationale. In the continuance, the research problem and empirical questions guiding the study will be presented, including the approach that has been applied to the research, and, lastly, the thesis outline is described.

1.1 Aviation security's 'raison d'être'[1]

The terrorist attacks on the World Trade Centre and the Pentagon as well as the attempted attack on Washington, DC, on September 11, 2001 (9/11), marked a shift in the view of risk and especially security related to aviation. The main reason for this shift was the nature of the attacks. They were attacks directly aimed at society in which aircraft were used as weapons. Since the beginning of commercial civil aviation, aircraft and their crews have been utilised in harmful plots with varying impacts and consequences. The types of threats and attacks have changed over time from people using the aircraft to escape prosecution to more political terrorism (for example, to press states into accommodating certain demands), and, lastly, the application of the aircraft as weapons, with 9/11 standing out as a forceful example. Although the threats and attacks have changed over time, it is clear that there have been undeniable threats to civil aviation with the potential to cause great harm and loss of life. Terrorism is the main threat that security measures are constructed to prevent. There are several reasons why aviation is particularly interesting to terrorists, but the main reason, according to Hougham, is that "[a]irlines are seen as national symbols. Airline disasters receive media attention disproportionate to the death toll and, if mass casualties are the goal, an airplane provides hundreds of people at 30,000 feet with no chance of survival" (Hougham, 2009, p. 143). Terrorism and intentional attacks on society have made the security field grow rapidly, both as a science and as a practice. When attacks are made on what societies value, a need to act arises – a need to handle, to predict and to protect. This is also where the field of security becomes complicated. Security is simultaneously about people's perception of security as much as it is about the physical moves of securing, for example, air travel. As Burgess (2011) explains, the aim of terrorists is not the actual disruption of services of railways or oil production or, as in this case, aviation. The aim is to achieve a loss of confidence with these services and to produce fear of future threats. It plays on producing signal effects on our already existing insecurities that lie at the core of our societies' psyches. Recovering from a terrorist attack like 9/11 will therefore be a two-part operation in which the first is to create a more secure system that can prevent

1 Justification or reason for existence.

similar attacks from happening again and the second is to restore people's belief that it is safe to travel by air.

This duality is also what makes it difficult to rate the security system's 'success'[2] because it depends on how one understands success. If the aim is to return to the state of affairs (considering passenger volume and its steady increase) found prior to 9/11, which presupposes that passengers' confidence in the level of security provided by the current system is restored, this is one way to measure success. Another way to measure success may be through the absence of attacks. The fact that civil aviation has not been subject to attacks anywhere near the magnitude of the 9/11 attacks may demonstrate success in the implemented measures post 9/11. However, not to dismiss this explanation, the absence of attacks may also be the result of other reasons. Security measures go way beyond the actual regulation and implementation of security at airports and on aircraft. A highly simplified contextualisation of security measures can be to separate three main defence mechanisms. The first we call foreign policy, since terrorism is also about the message that is sent to the attacked nation. A terrorist act can therefore be understood as a sort of reaction to a country's foreign policy (though I will not go deeper into this issue since that is not the aim for this argument). The second defence can be labelled 'intelligence'. Intelligence services attempt to unravel intentional plans of doing harm before they are realised. The third security mechanism is the security system and measures implemented at airports and airlines. This third mechanism is a sort of 'last frontier' in counteracting, stopping and/or identifying possible harm doers before they can inflict any damage on civil aviation. This thesis focuses on the third part of the security system, while acknowledging that these three mechanisms of the security system are intertwined but also complicate the possibility of evaluating the success of any single part of the system. Success in one part of the system may therefore be caused by another part of the system. In the attempt to somewhat simplify this structure, we can say that we cannot automatically equate the absence of serious attacks against civil aviation with the implementation of regulation and security measures at airports and airlines alone. While it *may* be the reason for the absence, there is also a possibility that the answer is more compound. An additional complicating factor for the difficulty of measuring

2 By 'success', I mean the system's ability to achieve the intended goals.

the success of the system is the possibility that there have been no further attempts to harm civil aviation. Although the Christmas Day bomber, who accomplished entering an aircraft with explosives in his underwear in 2009 (see the next chapter for an elaboration), demonstrated that there have been attempts to harm aviation, we cannot know whether the security system implemented post 9/11 has cooled off possible terrorists who would otherwise have intended to copy the 9/11 attacks or whether there have simply not been any plans or intentions to do so. Nevertheless, what these continuous attacks and intents to harm civil aviation show us is that there is a justification for having security systems and measures. The main point here, however, is to underscore how difficult and complex the task of evaluating the success of the security system is in reality.

The main question thus remains: If all the issues discussed above are so connected to uncertainty that it becomes difficult to evaluate the 'goodness' or success of the system, are there other things one can examine in their place? I suggest that a way around this problem is to ask which processes and factors render possible and facilitate the organisation of good security with safe and reliable outcomes – in other words, asking which factors facilitate and which factors hamper this achievement. In this thesis, I have chosen to apply the theory of High Reliability Organisations (HRO) to explore this theme. HRO theory provides insights for organisations that operate in high-hazard industries in understanding how it is possible to organise for high reliability. In understanding reliability, I apply Eede's definition: "Reliability is the system outcome that can be described as safe, effective and efficient, in terms of average and variance" (Eede, 2009, p. 5), in which average refers to an expectation that a system works 'most of the time', and variance refers to expected unreliable occurrences.[3] This definition works well with the main focus of this thesis, which is a high reliability organisation that produces security. However, because organisations, especially organisations that are connected to high hazards, have to operate within a landscape that tends to be heavily regulated, I believe that these two elements must be seen in relation to one another. I see regulation as a framework that the HRO has to operate within and which thus restricts or facilitates the organisational possibilities

[3] For further elaboration of average reliability and variance in reliability, see Eede (2009), pp. 3-5.

available to the HRO. I will return to this connection between regulation and organisation in Chapter 3.

I now turn to the application of the concepts of security and safety, which are key concepts in this thesis.

1.2 Security and Safety

In aviation, the distinction between security and safety has classified the types of undesirable risks to which aviation may be subjected. Intentionality is a characteristic that separates these two areas. Within safety, the goal has been to eliminate accidents. Maintenance, training, and detailed routines and procedures have been implemented to avoid accidents. Both the goal and the method for achieving this goal are quite straightforward since there is much knowledge about cause and effect relationships. The erring in maintenance and/or routines has caused accidents, such as doors on aircraft ripping off in mid-air or landing gear that does not open while the aircraft is landing on the runway. Tragic and costly as the outcomes of these kinds of accidents may be, they are, to some extent, predictable and explainable. It is also possible to learn from these accidents and to improve construction, maintenance and routines to prevent them in the future. Security, on the other hand, does not follow the same principles. There is a much larger degree of uncertainty and unpredictability connected to security because it revolves around intentional incidents in which someone plans to cause harm to the system. In other words, security incidents are a product of someone's imagination. Attacks on security are always *intended* to do harm. If something happens accidentally, it is a safety issue, *not a security issue*. Terrorism thus falls under the category of intended incidents, which is also why security in many ways is much less tangible and manageable than safety issues.

Security as a field is not new, and the study of security has roots as far back as the Second World War (WWII). The main focus of security studies can, in short, be described as 'the phenomenon of war' (Walt, 1991) or "the study of threat, use, and control of military force" (Nye and Lynn Jones 1988 in Walt, 1991, p. 212). Originally, security was an area exclusively operated by professional military personnel and was not open to the public or academia. However, during WWII, civilians became increasingly involved in military planning (Walt, 1991). Security studies have inherently been state centred. This was further aggregated by the Cold War, during which the

outlook for war was always at the surface. With the end of the Cold War, the focus shifted, and questions arose around the borders and limits of security and security studies, which up until then had been little contested and challenged (Lipschutz, 1995 p. 5). During the 1980s, there was a general trend to broaden the security agenda (Wæver, 1995, p. 48) Some of these approaches shifted the focus from a purely state-centric one (national security) and broadened it to include the security of people (individuals individually and collectively). The more modern security studies have been part of the 'International Relations (IR) -family' of studies. In short, IR studies can be described as the study of relationships and/or roles between countries or states, including their relationships with both governmental and non-governmental organisations.

Where does this leave aviation security? According to Szyliowicz, "aviation security is predominantly seen within a national security or policing frame" (Szyliowicz (2004) in Salter, 2008, p. 245). We can say that, prior to 9/11, this was still valid in both Norway and Europe, but with the implementation of the European Union's Security Regulation No. 2320/2002, this was moved from the national setting and to the European one as a sort of 'regional security' or 'supranational security'.

In the literature, the regulation of security has yet to be given the same place and space as the regulation of safety. This depends, of course, on whether one considers security as part of safety studies or whether it is considered as a field in its own right. Another reason for this, and perhaps the main reason, is that the focus security is taking and receiving in contemporary society is a quite recent event. This recent shift in focus has thus moved security out of the safety studies, where it received less specific focus, and has instead given it a field of its own. In some ways, this manoeuvring has left security without the theoretical anchor it had by being included in safety studies, and the study of security is often considered either as a practical matter (good or bad security, more or less security, the right to security, etc.) or on a more conceptual/philosophical basis (political/philosophical/ethical discussions). This is, of course, a highly simplified classification, and the development of security studies will be elaborated below. But for now, it serves as a vantage point for one of the main issues in this thesis, which is to apply typical safety literature to the security field to see if it can give any new insights into the security arena.

In regulation, to regulate safety and security the same way can be difficult because they struggle, as described above, with different kinds of risks. If we look to the Normal Accident Theory (NAT) for a moment, Perrow claims that organisational accidents are inherently normal and should be anticipated. Thus, although better procedures, regulations and training help keep organisations accident free, or at least keep accidents to a minimum, it is never possible to arrive at a 100% error-free rate. However, when a typical safety industry, like the petroleum industry, can celebrate 100 days without accidents, it may be explained by good procedures, well-executed operations and vigilant employees. In security, this description falls short since it does not necessarily have the same connotations. One hundred days without incidents may, of course, mean that the security system has been successful in not letting anyone with bad intentions cause harm to the system, but it may also mean that no one has tried. This illustrates one of the main differences between security and safety.

However, focusing on organisational processes as processes producing high reliability may deflate some of the differences between safety and security because one shifts the focus from variance in uncertainty to organisational principles that produce reliability.

1.3 Problem statement and the 'integrated approach'

As already outlined, the 9/11 attacks had major consequences for civil aviation. Although the attacks were executed over US airspace and soil, the impacts spread all over the Western world. New precautions and measures had to be implemented to secure aviation in this new risk scenario. This was also the case for European civil aviation, and the European Union quickly prepared a new regulation for the EU countries. This new security regulation, (EC) No. 2320/2002,[4] was intended to unite all regulation for aviation security within Europe and was constructed based upon the main documents from the European Civil Aviation Conference (ECAC).[5] Setting aside the national rules and regulations of the EU member states, 2320/2002 would establish common standards for aviation security. The EU Commission was given executive

[4] From here on referred to as 2320/2002

[5] Which again was constructed on the main documents of the International Civil Aviation Organisation (ICAO).

powers in the adaptation of the detailed implementation measures (European Parliament & European Council, 2002), thus relieving the national governments of their legislative powers and duties regarding aviation security regulation. The new regulation was officially passed in the EU on 16 December 2002, well over a year after the 9/11 attacks. As a member of the European Free Trade Association (EFTA) obligated to follow the European Economic Area Agreement (EEA Agreement), Norway, even as a non-EU member, accommodated this new regulation and developed national legislation that was intended to comply with the new EU level of security regulation in order to maintain open borders with the EU and avoid excluding Norwegian aviation from the rest of European civil aviation.

Although attempts have been made in the EU to change and facilitate the regulatory system to make it more open and more risk-based, the changes have been few and small. Thus, we can state that for the most part, the regulatory system for civil aviation security is highly prescriptive. By implementing a detailed regulation for all of Europe, the strengths of the national organising principles had to recede. The new way of organising security in Europe therefore had great consequences at the national level.

In systems that demand a high level of reliability, the level of detail is typically also high. Here, prescriptive systems are often applied where actions and/or procedures are predefined and thoroughly described in order to avoid discrepancy, ambiguity, slack, etc. At the core lies an assumption that compliance equals reliability. Studies performed within safety industries have described the consequences of regulatory types on organisation (see for instance Hutter, 2010; Kirwan, Hale, & Hopkins, 2002b; May, 2003, 2007; Peterson & Fensling, 2011; Wilpert, 2008). I have not yet found that any corresponding studies have been done in security environments or within the aviation security system. This thesis aims to fill that gap.

By bringing together the issues of regulation and organisation in aviation security, this thesis aims to contribute to an understanding of how prescriptive regulation has influenced the organisation of aviation security in Norway and to discern consequences this regulation has produced. The general problem to be addressed in this thesis is as follows:

> *What are the consequences of implementing EU security regulation in the Norwegian civil aviation system?*

In order to answer this research problem, a set of four specific empirical questions have been developed:

1. How was the security system for civil aviation transformed after 9/11 from a Norwegian perspective?
2. How was that transformation perceived by different agents within the civil aviation security system?
3. What challenges caused by the security regulations were described by people working at the selected airports?
4. What are the consequences attached to implementing a common security regulation, regardless of airport size?

These questions have guided the empirical endeavour and have been decisive in forming the research case, the methods, and the theory and literature chosen in this thesis. These questions also guide the empirical chapters and form the basis for the discussion chapter.

1.3.1 An 'integrated approach'

In this thesis, I have applied what I have called an integrated approach. The word *integrated* in relation to research often connotes cross-disciplinary approaches or the application of mixed methods. In relation to risk research, scholars such as Ortwin Renn have argued for integrating different perspectives on risk to give deeper understandings of both risk and the role of risk perception (Rohrmann & Renn, 2000). This has culminated into an integrative analytical framework, which integrates scientific, economic, social and cultural aspects in assessment and management strategies coping with risks (International Risk Governance Council, 2005).

However, the word *integrated* in this thesis alludes to my approach, which integrates several types of data collection from different levels of the civil aviation system. I have combined lengthy traditional ethnographic field work with structured and semi-structured interviews with officials from both the government and the authority levels in Norway and Iceland. Hence, the term *integrated approach* originally pointed to the methods applied in the research and the integration of data from many levels of the aviation system. This was a deliberate choice since I believed that this approach would create more layers to the research than it would have if the focus had been confined to either the organisational setting or the authority/government level. However, the analytical framework of regulation and organisation emerged along the way through the analysis of the empirical data that was collected and created yet another dimension to the integrated approach through the application of theory and literature from different disciplines.

Being a social anthropologist, this rendered possible an integrated study of risk regulation in practice, framing it through Norwegian strategic choices for the national implementation of a European security regulation.

1.4 Thesis outline

In this chapter, issues concerning security regulation in the civil aviation context have been outlined as the main area of interest in this study. Through the main research problem and the empirical questions, this issue has been situated and delineated in the setting of the Norwegian civil aviation system. In Chapter 2, I outline the background for the development of civil aviation security that has led to the system as it appears today. In addition, the most important organisations/institutions and documents are accounted for to provide an overall picture of how the aviation security system is constructed, interwoven and connected, both internationally and nationally.

Chapter 3 outlines the main concepts of risk and security applied in this thesis, resulting in a problematisation of how security risks can be perceived. In addition, a distinction between the regulatory types of prescriptive versus performance-based regulation is made to form an understanding of the range of regulatory types. The possibilities for the many variations can be comprehended by seeing these two types as belonging to two sides of a scale in which 'real' regulation is placed somewhere between the two. In this chapter, the main theoretical contribution of High Reliability Organisation

theory is accounted for, providing a foundation for understanding the organisation of security in aviation.

Chapter 4 describes my methodological approach. Because the case study has been complex, with several research fields and methods (integrated approach), I have attempted to provide the reader with more details about how I have conducted the research. This chapter includes descriptions of how I have planned and have realised the study for the reader to be able to, as far as possible, follow the road from the planning stages to how I came to the findings I present in later chapters. I also try to point out how my choice of methods has served well to generate profound and rich data, but I also describe the difficulties and challenges I have met throughout the study, which are connected to the kind of research I have done. Additionally, I provide some reflections around my interpretation, preconceptions and biases.

Chapters 5 and 6 form the empirical part of this thesis. In Chapter 5, I answer the first two empirical questions by accounting for the regulatory transition regarding aviation security described by the main actors in the Norwegian civil aviation system. I also present the Icelandic transition and strategic choices to provide an alternative view to the Norwegian system and Iceland's reasons for making choices different from what the Norwegian authorities chose. In addition, properties of the post 9/11 security regulation are described by the main actors in the Norwegian civil aviation system. Chapter 6 proceeds from the more superior layers of the civil aviation system down to the airport level, where rules and regulations are put into play. This chapter answers the last two empirical questions. Descriptions of the regulatory transition and how it has affected different agents at the organisational level are illustrated through accounts from the three main organisations/groups affected by the security regulations at the airport. Data presented here were gathered from three Norwegian airports of different sizes and geographical locations. It also includes the airline crew perspective, which is presented separately, since airline crew is, to a large extent, more detached from any specific airport.

Chapter 7 connects the findings from the two empirical chapters with the theoretical approach of regulation and HRO theory. Here, the consequences of the choice of regulatory types are discussed along with the impacts it has for the possibilities to organise security in civil aviation. In addition, I also demonstrate the relationship between the choice of regulatory type and the

possibility of airport security operating according to the principles of High Reliability Organisations. The chapter concludes by outlining current trends in the regulation of aviation security seen in relation to some of the main outcomes of this study.

Chapter 8 is the concluding chapter where conclusions, contributions and limitations are provided. I end the chapter with suggestions for further research.

2 AVIATION SECURITY: BACKGROUND AND CONTEXT

Following the birth of commercial aviation in the 1920s, it was not long before aircraft and crew were used for malicious intents. There have been many attempts to use aircraft in attacks, from the first 'recorded' hijacking in Arequipa in 1931[6] to the intent of the 2009 'Christmas Day Bomber' or 'Underwear Bomber' (further described below) to bomb Northwest Airlines Flight 253 headed for Detroit. The development of security measures in aviation corresponds, to a large extent, to the attacks made against commercial civil aviation. Responding to those attacks and threats, international organisations and regulatory frameworks have evolved to safeguard the continuance of aviation.

The main objective of this chapter is twofold; first, to depict the relationship between intentional attacks against civil aviation and the concurrent development of organisations, documents and regulations. This will describe how the regulatory system for aviation security is event-based and retrospective and also place regulation within an international and European framework. Secondly, I want to situate aviation security in the Norwegian setting. In order to understand how the current regulatory system for civil aviation security is constructed, I will firstly take a closer look at the main evolution of what we can call an international aviation system, involving first international, then later, European organisations and regulations. Secondly, I will examine the Norwegian aviation system by describing its main actors and regulations. This background knowledge is necessary to understand how Norwegian regulation is connected to European regulation and to see how the EU regulation obliges member (and non-member) countries. This will facilitate the discussion of the main research problem which is the discussion of the consequences of EU regulation in Norway.

[6] The hijacking occurred after a flight between Lima and Arequipa in Peru, where pilot Byron Rickards was 'arrested' by a revolutionary organisation upon landing. He was released almost two weeks later (Guinnes World Records, 2013)

2.1 Development of security in aviation

The 9/11 attacks on the World Trade Centre stand out as the largest and most far-reaching attack to date, mainly because of the consequences the incident produced in how aviation security became organised. However, there have been various periods of attacks from early on in aviation history, which have caused a continuous development of rules, recommendations and regulations. There are three main phases in the kind of threats that have formed the basis for general development of security in aviation:

- Phase 1: 1948 – 1968: Flight from persecution or prosecution
- Phase 2: 1968 – 1994: The political phase
- Phase 3: 1994 – present: The aircraft as a weapon of destruction

(Irish Aviation Authority & Aviasolution, 2004)

Phase 1

This was the era of hijacking aircraft as a way for individuals to avoid persecution or prosecution. The airplane could be used as a quick and effective way to flee from a state to avoid prosecution. An example of this was the hijacking where three crew members (the pilot included), together with 21 of the 26 passengers, hijacked an airplane on the 6th of April, 1948. The plane was hijacked on a domestic flight between Prague and Bratislava (Czechoslovakia); it landed in the U.S. occupation zone in Munich (Irish Aviation Authority & Aviasolution, 2004). The hijackers were fleeing from the Iron Curtain of the East to apply for asylum in the West. The episode intensified the Cold War between the East and West.

Phase 2

This has been called the political phase and is seen as the beginning of 'modern terrorism', with a link between politics and terrorism. The goal in this period was to exert pressure on the state through embarrassment, extortion or damage to the economy of the state. One of the most well-known examples of this was when Pan Am Flight 103, going from London to New York, was bombed on the 21st of December 1988. An explosive device placed

on board killed 243 passengers, 16 crew members and another 11 people on the ground where the plane crashed in Lockerbie, Scotland. Libya later admitted responsibility for the bombing (Gillen & Morrison, 2014).

Phase 3

In this phase, aircraft were beginning to be used as weapons. Phase 3 is considered the most dangerous and the most difficult to defend against. The third phase of attacks was introduced by the hijacking of Air France flight 8969 by Algerian terrorists on the 24th of December 1994. Their intention, supposedly, was to blow up the aircraft over the city of Paris, but the aircraft was diverted to Marseille and stormed by commandos who rescued both passengers and crew (Irish Aviation Authority & Aviasolution, 2004). Here we see that the purpose of the aircraft attack had changed to being intentionally applied as a weapon. This ongoing phase also comprises the attacks on the 11th of September, 2001, where aircraft were intentionally crashed into high profiled buildings in the US. Two aircraft crashed into the World Trade Centre, one crashed into the Pentagon in Washington, D.C., and the last aircraft crashed in Shanksville, Pennsylvania, reportedly headed for the White House.

Since the 9/11 event also caused the major changes in European regulation of aviation security, it will be elaborated more thoroughly below in relation to its impact on regulatory development. In addition, other incidents that have had a direct or indirect effect on aviation security regulations will be described.

2.2 Major intentional attacks in civil aviation post 9/11

The 9/11 attacks

As outlined above, within the third phase we find the most well-known attack against commercial aviation, the intentional attacks on the 11th of September 2001, or 9/11. By hijacking four aircraft, terrorists were able to deliberately fly two of them into the two buildings that constituted the World Trade Centre in New York, demolishing both buildings and causing the death of more than 2,800 people (the combined death tolls from both the World Trade Centre and the airplanes). In addition, a third aircraft was flown into the

Pentagon in Washington, D.C., and the fourth (which was supposedly intended to crash into the White House) crashed in Pennsylvania after passengers tried to regain control over the hijacked aircraft. The events of 9/11 demonstrated a change in the nature of the attacks, wherein the intention was to inflict maximum collateral damage (Irish Aviation Authority & Aviasolution, 2004).

The attacks on the 11th of September, 2001, had major impacts on several levels. One of the main findings from the 9/11 Commission[7] was that "The most important failure was one of imagination" (National Commission on Terrorist Attacks Upon the United States, 2004a, p. 9), underscoring the commission's belief that the leaders of the U.S had not understood the gravity of the terrorist threat prior to 9/11. Similarly they stated that "The 9/11 attacks were a shock, but they should not have come as a surprise" (ibid, p. 2), since Islamic extremists had given several warnings that they aimed to indiscriminately harm Americans in large numbers. This lack of imagination led to failures at several levels, including the political, intelligence and border levels, including aviation security. The aviation security level was deemed 'permeable', whereby the terrorists in practice were only subjected to a single layer of security control, which was the one they went through at the airport. The report recommended several improvements to aviation security measures that would prevent the possibility of any similar attacks.

The results found in the aftermath of 9/11 are unparalleled. No other incident has ever had such widespread consequences for the organising of security. Security procedures have always been reactive, responding to previous attacks. Prior to 9/11, however, improvements in aviation security put forward by international organisations, such as the International Civil Aviation Organisation (ICAO) and the European Civil Aviation Conference (ECAC) (see below), were not mandatory. The policies have always been based on voluntary, not mandatory, compliance, which means that the countries have adopted (or not) the international organisations' recommendations (Szyliowicz, 2004). This has resulted in a disjointed and

[7] The 9/11 Commission was an independent commission created to account for the circumstances surrounding the 9/11 attacks. The commission was appointed by the President George W. Bush in late 2002 (National Commission on Terrorist Attacks Upon the United States, 2004b)

incremental approach rather than a unified standardised system between states (ibid). If we use the Lockerbie airliner bombing as an example, there had been policy proposals prior to the incident. These proposals recommended both full security screening of passengers and cabin luggage and reconciliation of baggage, meaning that if a passenger does not board the plane, the baggage is removed. This is to avoid people potentially checking in baggage holding bombs or anything intended to harm the aircraft, without travelling themselves. By 11th of September, 2001, most states had still not implemented national regulations in accordance with these recommendations. Expressed differently, the need for such procedures to avoid similar attacks as the one over Lockerbie, was identified and the procedures were developed and recommended, but the voluntary compliance nature of the recommendations had resulted in most countries not implementing the corresponding regulations. Aviation security improvements prior to 9/11 were developed through documents as ICAO's Annex 17 and ECAC's Doc 30 (elaborated below). Although these were voluntary, they were made mandatory after 9/11 and became the bases for the development of regulatory changes in the U.S. and in Europe's regulation EC No. 2320/2002, which is further described below.

The liquid ban

The liquid ban was implemented after an attempted terrorist attack and demonstrates the very reactive way regulation is developed. In 2006, a terrorist plot was foiled before it was carried out. This plot intended to detonate liquid explosives carried on board at least 10 airliners travelling from the United Kingdom to the United States and Canada. The plot was discovered by British police before it could be carried out. On the night of August 9th, the police arrested 24 men who planned to place liquid explosives in soda bottles onboard the planes. According to British terrorism experts, this resembled an Al-Qaeda plot, especially since the militant Islamic organisation had threatened to attack British aviation only weeks prior to the arrests.

The main result of this attempted attack was the implementation of the 'liquid ban'. First, liquids were banned completely, but in the following weeks this was adjusted to the limit of allowing passengers to bring 100ml containers in their hand luggage. A recent regulatory development in the EU opens for removing the restrictions in 2014 (European Commission, 2013).

The Christmas Day Bomber

One of the most recent terrorism attempts against civil aviation is the so-called 'Christmas Day bombing attempt', also known as the 'underwear bomber'. The attempt was made on Northwest Airlines Flight 253 between Amsterdam, Netherlands and Detroit, USA. On the 25th of December, 2009, a 23-year-old Nigerian, Umar Farouk Abdulmutallab had concealed plastic explosives sown into his underwear and attempted to detonate it before landing in Detroit. He failed to detonate the explosives properly and drew attention from passengers and crew before he could carry it out. He was overpowered by a passenger, and the burning, undetonated device was extinguished by flight attendants. Al-Qaeda later announced that they had been responsible for the attempted attack. If the bomb had been successfully detonated, the 290 persons on board would have died, and it would have been the deadliest aviation incident on U.S. soil. Although this incident did not generate any direct regulatory changes, it demonstrates the continuing threat facing civil aviation.

The Kato Air incident

There have been no direct, grand scale attacks on Norwegian civil aviation. There have, however, been hijackings on Norwegian aircraft or foreign aircraft hijacked to land on Norwegian soil (Tønnessen, 2008). These fall under the first and second phase categories, which are either hijackings to escape or politically motivated hijackings. The perhaps most well-known attack against Norwegian civil aviation was the Kato Air incident in 2004. On the 29th of October, 2004, on a morning flight between Narvik and Bodø, a small Dornier 228 airplane operated by Kato Air was subjected to a mid-air drama. A passenger onboard this flight entered the cockpit and attacked both pilots with an axe he had brought with him. After attacking them, he threw himself on the navigation controls and caused the plane to go into a spin. Thirty meters from the ground, the pilots retrieved control over the plane and were able to level it. While the pilots were struggling with the attacker, they managed to call for help and two passengers came to their aid. Together they were able to overpower the man, holding him down until they landed at the airport and the police took over. While three people were submitted to hospital care, all seven passengers and the two pilots survived in what was an incident only a hair's breadth away from a disaster (Aftenposten, 2004). The

attacker himself was an asylum seeker from Algiers whose application for Norwegian asylum had just been rejected. He claimed insanity in court but was found to be sane and sentenced to 15 years in prison. He was later expelled from Norway back to Algiers, where he had been sentenced in absentia for other offenses (Moe & NTB, 2007).

Hence, while there have been no terrorist attacks directly aimed at Norwegian civil aviation, the Kato Air incident became influential for Norway, accelerating the implementation of the EU Regulation 2320/2002. Within 48 hours, security was implemented on all Norwegian regional (small) airports, which, until then, had been exempted for the full implementation because of an interim arrangement with the European Union. Although it had been decided that security regulations would be instated on the 1st of January, 2005, it was immediately implemented after this incident. Although the Kato Air incident was not defined as a terrorist attack, it was an intentional attack aimed at harming aircraft and passengers.

The Blenheim hijacking in New Zealand in 2008

During the interviews with the Norwegian Civil Aviation Authority (CAA)[8], one of the interviewees brought up a case from New Zealand where the Norwegian government had been contacted by the New Zealandian government. They enquired how the Norwegian authorities had handled the Kato Air incident, because there had been an incident in 2008 that resembled the Kato Air attack; the so-called 'Blenheim hijacking'. The CAA used this case as an example of other variations of security measure implementation on domestic flights, since the result of the Blenheim case had not resulted in the same, immediate implementation of security measures as had happened in Norway after the Kato Air incident. I account below for the New Zealandian incident and the New Zealandian Governments' assessment after the incident.

On the 8th of February, 2008, Eagle Airways Flight 2279 between Blenheim and Christchurch, New Zealand, was hijacked. There were two pilots and six passengers, besides the hijacker, a 33-year-old Somali woman living in Blenheim. Ten minutes after takeoff, she attacked the two pilots with

[8] The Civil Aviation Authority contributed with data through several interviews. See below for a description of their position within the Norwegian Civil Aviation system and also chapter 4 'Methodology' for an elaboration of data generating.

knives and demanded the plane be flown to Australia. The pilots informed her that the aircraft had insufficient fuel. She then demanded that the plane crash into the ocean. She also tried to interfere with the controls of the aircraft, stating that she was going to crash the plane and kill everybody, claiming she had bombs in her luggage. The aircraft landed safely in Christchurch, where the pilots overpowered her and the police took her into custody (The Sydney Morning Herald, 2008). The woman was a Somali refugee who had stated previously that she had trouble coping in New Zealand society. In the court trial, she pleaded guilty to the charge of attempted hijacking of an aircraft and was sentenced to nine years in prison.

This case significantly resembles the Norwegian Kato Air incident, which is why it is presented here. Although New Zealand is distant from the European Union and Norway, it is interesting to see how the incident created consequences for aviation security. Neither the Kato Air incident nor the Blenheim hijackings were defined as terrorist acts. The New Zealandian Cabinet (Government) directed officials to review domestic aviation security after the Blenheim incident. The review stated that "the threat from acutely disaffected people [is currently assessed] to be **MEDIUM** (feasible and could well occur). The threat posed to domestic aviation by terrorism is currently assessed to be **VERY LOW** (unlikely)" (Ministry of Transport, 2009a, p. 2 (original emphasis)). At the time of the review, only 57 per cent of all passengers were screened. The review committee developed alternative strategies in which additional security screening procedures would be "broadly consistent with international best practice and would bring New Zealand into line with other OECD countries" (Ministry of Transport, 2009a, p. 1). A large percentage of the OECD members are also EU members (Norway included), and it is therefore reasonable to juxtapose what the New Zealandian Government describes as 'OECD level' of security and the EU level of security regulation. However, on the 18th of May, 2009, New Zealand Transport Minister, Steven Joyce, announced that the government would not extend security screening for domestic air travel. He announced that, "fortunately, events like the alleged hijacking in February 2008 are very rare in New Zealand. While there will always be some risk with unscreened passengers on domestic aircraft, the cost of implementing additional screening would have a disproportionate impact on domestic aviation and is therefore

unjustified, particularly in these tough economic times" (Ministry of Transport, 2009b).

The Blenheim case is interesting when seen in relation to the Kato Air incident, as they ended up having quite different impacts. While the Kato Air incident was not decisive on whether regional Norwegian airports should have full security screening or not, since this had already been decided by the Norwegian authorities, it had an immediate effect. In Norway, full security screening was in place two days after the incident. In New Zealand, the Blenheim case initiated a public review of the system and based on this review, the New Zealandian government, through the Ministry of Transport, decided that implementing the same measures on the domestic flights as they had on international flights was disproportionate in relation to the threat level and, therefore, unjustified. Instead, they implemented additional flight deck security on domestic flights, which would make it more difficult to accomplish a Blenheim-style or Kato Air-style incident.

2.3 Development of international organisations concerning aviation

In order to understand Norway's obligation in and to the European Union, it is vital to understand the main background for the EU, since the European Economic Area agreement (EEA) in a way evolved as an alternative to the EU for countries that, for different reasons, did not join the Union. The EEA agreement is what obliges Norway to follow much of the EU regulation and not the EU directly. I will here outline the main development of the European Union and the European Free Trade Association (EFTA), in addition to the EEA agreement between the two organisations, to explain the connection between them and how their members this way are obligated through the EEA agreement, not only in trade but also in legislation.

The development of the European Union

After the 2nd World War, there were movements in the direction of unifying the European continent as a counter to extremist nationalist movements. That was the onset of the European Coal and Steel Company (ECSC), which attempted to unite the member states to avoid further wars by pooling resources. The Rome Treatise was signed in 1957, further elaborating

the ECSC and starting the European Economic Community (EEC), which established a customs union and the European Atomic Energy Community (Euratom) for the further development of nuclear energy. Although the EEC and Euratom were established separately from the ECSC, they shared the same courts and Common Assembly. In 1967 the Merger Treaty was signed, gathering the three communities under the name of the European Community (or European Communities) and creating common institutions for them. During the 1970's, more countries joined the Community, and the first democratic election to the European Parliament was held in 1979. The Schengen Agreement opened up the borders between the EU countries and some non-EU countries (such as Norway) in 1985. In 1993, the Maastricht Treaty formally established the European Union. The last great change happened in 2009, when the Lisbon Treaty changed especially the legal structure, merging the three pillar systems into a single legal entity.

What we today know as the European Union began in the aftermath of the large World Wars with the intention to unite Europe through common interests. This developed further into having more political and legal content and, ultimately, opening the borders between the member countries to facilitate the movement of people, labour and goods. Not all countries entered this union, and this rendered certain things difficult when it came to free movement.

The development of the European Free Trade Association (EFTA) and the European Economic Area (EEA)

The European Free Trade Association (EFTA) was established in 1960 as an alternative for states that did not join the European Community (EC), which today is the EU. The Stockholm Convention established EFTA in 1960, which was then signed by seven countries[9]. Today only four countries – Norway, Iceland, Liechtenstein and Switzerland – are still part of the association. These countries (except Switzerland) are part of the European Internal Market through the European Economic Area agreement (EEA), an agreement between the member states of the EU and the member states in EFTA. Although Norway is not an EU member, the agreement between the EU and EFTA makes Norway part of the European Internal Market (also

[9] Austria, Denmark, Norway, Portugal, Sweden, Switzerland, United Kingdom

known as the European Single Market), comprising free movement of people, goods, services and capital. Because of this membership, Norway has to implement and comply with all regulations found relevant to the EEA Agreement, which for aviation security ordinarily comprises about all of the EU legislation.

Although Norway chose by referendum not to seek membership in the EU, the EEA agreement can be considered as a compromise or possibility to be able to participate in the European market on the same level as the other EU countries. Switzerland, however, chose by referendum not to be part of the EEA agreement, although they are EFTA members, and is not obliged to follow the EU regulation in the same way. Membership in the European Internal Market has advantages, but it simultaneously obliges; hence Norway's obligation to follow the security regulation for civil aviation.

The Convention on International Civil Aviation

In 1944, the Convention on International Civil Aviation (also known as the Chicago Convention) established a specialised agency of the United Nations, the International Civil Aviation Organisation (ICAO), to be responsible for regulating international civil aviation. It was originally ratified and implemented in 1947 by 52 states and has been revised eight times since then. The convention established rules of airspace, aircraft registration, and safety and comprises 18 annexes. Annex 17 treats security issues and includes requirements the civil aviation sector must accommodate. The Chicago Convention was not legally binding, but member states agreed to report any deviations from the rules. Norway ratified the convention on the 30th of January 1945, and the national regulations have been adjusted to accommodate the intentions of the convention. The EU Regulation 2320/2002 for civil aviation was based upon the European Civil Aviation Conference's (see below) Document 30 (DOC 30), which again was built on ICAO's Annex 17. The largest difference between the Chicago Convention's annexes and the EU regulations is that, while the Chicago Convention based their regulation on voluntary compliance, which implied that the members were obliged to report deviations from recommended regulations, the EU required all member countries to comply with the regulations.

European Civil Aviation Conference

The European Civil Aviation Conference (ECAC) was founded in 1955 by the ICAO and the Council of Europe[10]. Starting with 19 member states, ECAC today has 44 member states, including the EU's 27 members. ECAC's main task is to promote a safe, efficient, and sustainable European air transport system (ECAC, 2012). Its main strategic priorities are safety, security, and the environment. ECAC was a major agent in the development of the EU regulatory system for aviation security.

2.4 Important documents and regulations

Thus far, the main organisations related to aviation security internationally and in Europe have been described as well as documents and regulations governing aviation security given cursory treatment. These documents and regulations form the basis and framework within which the aviation security system operates (both internationally and nationally) and will, therefore, be described next in more detail.

2.4.1 International

Annex 17

As outlined under The Convention on International Civil Aviation, ICAO established 18 Annexes. These constitute the Standards and Recommended Practices (SARPs) for international civil aviation. The annexes treat recommendations and standards for airspace, aircraft registration, and safety. Some examples are Annex 3, which treats Meteorological Service for International Air Navigation; Annex 12, which treats Search and Rescue; and Annex 18, which treats The Safe Transport of Dangerous Goods by Air. Annex 17 treats security and was instituted to "prevent and suppress all acts of unlawful interference against civil aviation throughout the world" (ICAO, 2013). This manual provides guidance and procedures on how to safeguard civil aviation against unlawful acts (ICAO, 2010). The Annex comprises 5 chapters: 1. Definitions, 2. General Principles, 3. Organisation, 4. Preventive

[10] Not to be confused with the European Council of the European Union. The Council of Europe is not a part of the European Union but is an independent organisation working for, among other things, human rights and democracy in Europe

Security Measures and 5. Management of Response to Acts of Unlawful Interference.

Doc 30

The ECAC developed Doc 30 as a common security manual for Europe to be used by the member states (Irish Aviation Authority & Aviasolution, 2004). It was first authorised in 1985 largely based on ICAO's Annex 17. During the last decade, developments made in Doc 30 were later implemented in Annex 17, coming full circle (ibid).

(EC) No. 2320/2002

The regulation (EC) No. 2320/2002 established a common regulation on security for the European Union member states in 2002. The main objectives of the regulation were to:

- Establish and implement appropriate Community measures, in order to prevent acts of unlawful interference against civil aviation
- Provide a basis for a common interpretation of the related provisions of the Chicago Convention, in particular its Annex 17

(European Parliament, 2015)

By setting common standards that member states were obliged to follow, instead of recommendations that were not legally binding, security in Europe would be better and more consistent. "The level and quality of aviation security in Europe is widely considered to have improved significantly since the introduction of Regulation (EC) No 2320/2002 together with a system of legally-binding inspections" (Irish Aviation Authority & Aviasolution, 2004, p. 29).

EC No. 300/2008

The regulation (EC) No 300/2008 is the overhauled replacement framework of the 2320/2002 and was put in effect on the 29th of April, 2010[11]. According to the interviewee from the Ministry of Transport and Communication (see Chapter 5), the main aim of the new regulation was to

[11] It was therefore not instated during the time of the data collection for this thesis

simplify the regulation (2320/2002), and for it to become more risk based, which was a clear wish especially from the industry. As stated by industry sources, "the replacement of EC No 2320/2002 with No 300/2008 [is] a step toward a more flexible and better-harmonized aviation security system within Europe" (Poole, 2008, p. 15). Although one can see the new regulation as a move in the 'right' direction, a Policy Manager in ACI Europe stated in November 2008 that, "We are still in the early processes of a truly risk-assessment-based system in aviation security" (Poole, 2008, p. 15).

The principle of 'One-Stop Security'

Neither a document nor a regulation, the principle of 'One-Stop Security' is a fundamental principle in aviation security. The objective of One-Stop Security is that people travelling within the aviation system should only be screened for prohibited items once, at the beginning of their journey (IATA, 2013). In practice this means that when a passenger is security cleared, no matter which airport he originates from, he is considered 'clean' within the whole system and should not be subject to a new security screening. The One-Stop Security principle was set as a desirable goal within European aviation and was practiced prior to 9/11.

The principle of One-Stop Security explains why a security control needs to have the same level of thoroughness, regardless of which airport performs the security screening. The essential point is that when a passenger is 'inside' the system, he has received the label of being clean independently of his original departure location. For 'clean' passengers to be of the same 'quality' it demands that they be screened equally thoroughly, no matter where they enter the system.

2.4.2 National

The Aviation Act

The Aviation Act, established in Norwegian law in 1993, is administered by the Civil Aviation Authority (CAA). The CAA is responsible for presenting regulations, called BSLs (Bestemmelser for Sivil Luftfart), that regulate all parts of Norwegian civil aviation. In this law, there are established directions on how to act according to the EEA Agreement; in the first chapter, it is stated that "For air traffic that is comprised by the resolution

of the EEA Agreement, rules of complementing and implementation of the EEA Agreement on the area of aviation is valid in preference to the other law's regulations" (Samferdselsdepartementet, 1993 [my translation]). This means, in practice, that a regulation found to be valid for the EEA agreement takes precedence over the original regulations of the Norwegian Aviation Act.

The Public Administration Act

The Public Administration Act (PAA) of the 10th of February, 1967, is a law stating general rules on how cases should be handled and/or treated in public administration (SNL, 2013). The law is valid for procedures in caseworks regarding both individuals and public organs. Describing the Public Administration Act and its mission, KS[12] writes that "The PAA contains rules of procedure important for a good ethical standard. It contains practical rules to ensure equality and due process of law and to counteract misuse of power in administration" (KS, 2010 [my translation]). In addition, the PAA states that every case should be thoroughly illuminated, that all parties shall be given the opportunity to comment on the case and that a correct and adequate decision should be based on facts. In other words, the ethical values expressed here say something about the foundation upon which decisions are to be taken. They should be thoroughly elaborated, exposed to critique, equally applied for all, and all groups/individuals affected by the issue should be able to comment.

2.5 National Aviation System

Next I briefly present the main agents of the Norwegian civil aviation system, how they are associated internally, and what their responsibilities are.

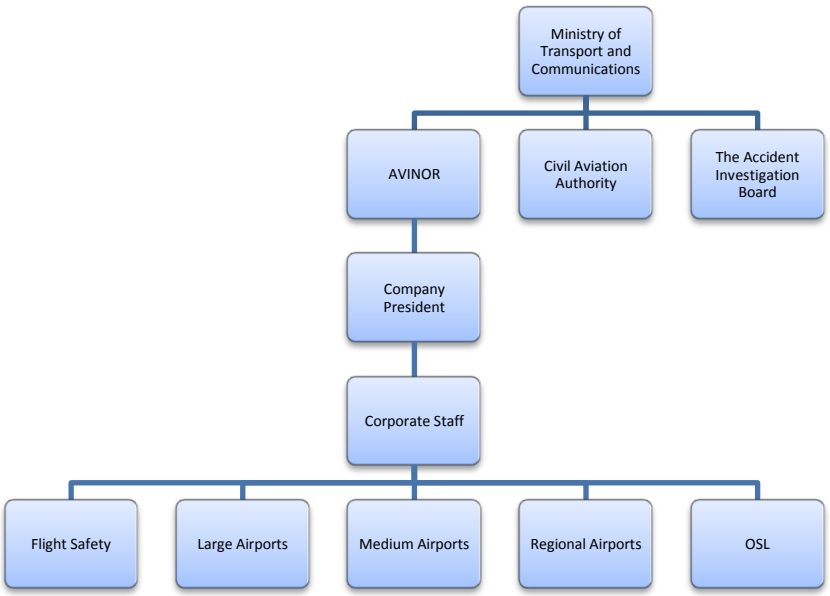
2.5.1 The Norwegian Civil Aviation System

Until the year 2000, the Authority of the Norwegian Air Traffic and Airport Management Agency (Luftfartsverket) directed all areas related to aviation and airport operations. In 2000, it was decided to subdivide this agency into three new agencies (see Fig. 1), in which the Civil Aviation Authority (CAA) would work in a control function, the Accident Investigation

[12] The Norwegian Association of Local and Regional Authorities

Board[13] would work as an investigative organ, and AVINOR, established in 2003, would function as a government-owned limited company and owner and operator of the majority of airports in Norway (46) (Avinor, 2013b). By dividing the aviation authority, each division was to become more specialised in their own areas.

Figure 1: The Norwegian Civil Aviation System (2008)



The Ministry of Transport and Communications (MTC)

The Ministry of Transport and Communications is one of 17 ministries subordinate to the Norwegian Government, led by the Prime Minister's office. The Ministry is a political body that develops and promotes transportation policy in Norway. The superior aim for the transportation policy is to "offer an effective, available, safe, and environmental sustainable transport system that covers the society's need for transportation in addition to regional

[13] Will not be treated in this thesis, due to its main focus on safety-related accidents

development" (Samferdselsdepartementet, 2010, p. 1 [my translation]). The connection between the Ministry and the Civil Aviation Authority (CAA) is that the CAA has the main responsibility for the supervision and inspection of Norwegian civil aviation. As described by the Norwegian Government, "It [the CAA] should be an active pushing agent for safe and public useful aviation according to the superior goals for the Government's transport policy" (Samferdselsdepartementet, 2010, p. 1 [my translation]).

The Civil Aviation Authority

The CAA has six key areas, the security department among them. The main goal for the security department is to participate in developing the body of rules nationally and internationally regarding aviation security and to perform inspections of airports, airlines, cargo companies, airport suppliers, security guard training companies, and so on. The work of the CAA is subjected to control and inspection by the EFTA Surveillance Authority (ESA). In practice this means that the ESA performs inspections of the different areas for which the CAA is responsible, and the CAA will, therefore, be held accountable for all eventual errors, lacks or malpractice in these areas. In other words, the CAA inspects the airports and airport companies and the ESA inspects the CAA.

Avinor

Avinor is a government-owned, limited company that operates 46 of Norway's commercial aviation airports. In addition to the employees at the various airports, Avinor has a main office located in Oslo (Bjørvika). This is where they not only plan and prepare everything for the airports, but also manage the cooperation with the CAA, the Ministry of Transport and Communications and international organisations, committees and forums. Security is one of the company's four divisions. Avinor is responsible for implementing and executing security measures at all airports, which in practice means they are responsible for ensuring that all companies at the airport operate according to the security regulations. These companies can be anything from companies that provide fuel for the airplanes to the cafeterias located within the security-restricted area or the security companies that screen passengers, luggage and cargo. Regulations come from the CAA to

Avinor, and the CAA controls and inspects the airports. These inspections may be either unannounced or announced.

2.6 The airports

As elaborated above, Avinor operates most Norwegian airports for commercial aviation. In addition to Avinor's 46 airports, there are a number of private airports; the two largest are the Rygge and Torp airports and municipal airports like Skien and Notodden. If we do not count Rygge and Torp, the private and municipal airports are small with departures mainly aimed at the West coast, the main area for the petroleum industry. All airports, whether private, municipal, or governmental, are subject to follow the EU regulations.

To create an image of how an airport functions, regarding its composition and administration, we can say that the airport is operated by Avinor, which administrates the airport. The size of the work force depends on the airport's size. Avinor is responsible for administration, fire and rescue and airport patrol (only applicable at the large airports). Many companies work at the airport. We can separate these into two main groups. The first comprises the companies that are mainly doing business aimed at the passengers, including restaurants, cafeterias, shops, etc. These companies mainly make contracts with Avinor at the local airport. The second group comprises the companies that must comply with the security (and safety) regulations and are subject to control by the Civil Aviation Authority. This means that, in addition to relating to Avinor, they also have to relate to the CAA directly. Examples of these companies are airlines, handling companies and suppliers of fuel and catering services. The CAA publishes the regulation these companies must comply with, and they are also subject to inspections. If breaches of the regulation (security and/or safety) are revealed, the company may lose its license and will be unable to continue operating at the airport.

In selecting which groups should be part of my research case, some companies were chosen based on their interaction with the security regulation. This delineation is further described in Chapter 4, but here I will depict these companies as part of the description of the composition of the airport.

2.6.1 The Security Companies

In Norway, Securitas and G4S are the only two companies operating at Norwegian airports. G4S has only been used at Oslo Airport Gardermoen (OSL). OSL operates somewhat independently due to its status as a subsidiary company of Avinor. In Norway the security screening services are selected through an open bid process. Different companies have been used since passenger and baggage screening started, but in 2008, Securitas won the bid on a five-year contract with Avinor as security providers at all Avinor airports except OSL.

SECURITAS

Securitas is a Swedish security company that operates internationally. It provides security personnel for everything from shopping malls to concerts, buildings, etc. Airport Security is a division within the Securitas organisation, which is certified by the CAA to educate its own security guards. They are also subjected to continuous testing and inspections by Avinor and the CAA and through their automatic computer testing system, 'Threat Image Projection' (TIP). They are also tested by markers (people with prohibited items on themselves or in their luggage). Avinor will hold the security company responsible in these tests, while the CAA will hold Avinor responsible.

G4S

G4S is an international security providing company with headquarters in England. In Norway they provide airport security only at Oslo Airport Gardermoen (OSL), where there were approximately 700 employees in 2009. G4S has much of the same company structure as Securitas and provide security for many different areas in addition to the airport security division. Since OSL operates more freely, it was able to solicit its own bids for the security services contract, which G4S won in 2007. G4S is subjected to the same testing and inspections as Securitas and is also certified to educate its own security guards.

2.6.2 Handling Companies

The handling companies at the airports are responsible for all aircraft, passengers, luggage, and cargo entering the airport by redistributing or redirecting them and/or turning them around. This means receiving the aircraft after landing, guiding it to gate, getting people off the aircraft and giving them their luggage while receiving cargo that either needs redirecting or sending on, and then managing the turnaround of the aircraft by boarding passengers, luggage and cargo and guiding the aircraft out of the gate.

The handling personnel are one of the employee groups most subject to security screenings, as they often have to move between security-restricted areas and non-security restricted areas[14]. An example is gate personnel who, in a typical workday, begin at the check-in desks (non-restricted) and later move over to the gates (restricted) to board passengers. When boarding is finished, they return to check-in for the next flight. Thus, they are moving back and forth between the restricted and non-restricted areas and also back and forth through the security check. Security checks for employees are not lighter or more superficial than the passenger security check. The ramp agents represent another employee group within the handling company who move continuously between lesser or more restricted areas at the airport and go through security checks for each passing. At some airports, workers experience up to 20-30 checks during a shift.

SGS – SAS GROUND SERVICES

SGS is part of SAS (Scandinavian Airlines), the largest Scandinavian airline. They mainly provide ground services for their own company but are open for contracts with other airlines also. All ground service contracts are open for bids.

NORPORT

Norport Handling is a competing company to SGS that provides ground services for different airlines. Norport is a younger company than SGS, as they were established during the process when new airlines, national and international, were being introduced into the Norwegian market around 2002.

[14] For an elaboration of the security restricted areas, see chapter 6.

Norport operates at five Norwegian airports, including Sola Airport which is one of the airports in this study.

2.7 Summarising comments

In this chapter I have accounted for some of the major development characteristics of aviation security. As we have seen, aviation was considered early on as an international matter, and the International Civil Aviation Organisation (ICAO) initiated the work to develop rules and recommendations that would strengthen aviation against unwanted incidents. We can see that the framework for supranational regulation was already anchored on the international scene several decades before 9/11. The big difference was in the extent and magnitude of the regulation framework before and after 9/11. National regulation, which had been guided by the recommendations from the ICAO and ECAC, was replaced by a common regulation for all European countries, taking precedence over the national regulation. How this was accomplished in practice will be more thoroughly described in Chapter 5.

Through the descriptions in this chapter, it is clear that aviation security can be labelled as event-based, meaning that regulation emerges in response to events. A very evident example of this was the liquids ban implemented in 2006 after an attempted use of liquid explosives to harm aircraft.

In this chapter I have outlined how the Norwegian civil aviation system is composed in order to create an image of their areas of responsibility. I also described the airport companies that are included in this study. The empirical material presented in Chapter 6 is principally gathered from within these companies.

This chapter provides the background and context for understanding the empirical material presented in chapters 5 and 6. In the next chapter, I continue with my theoretical perspectives and present the main concepts.

3 THEORY

3.1 Introduction

Much of society's activities are about the handling and controlling of risks that threaten our way of life, people and activities. This is also true for aviation security. Aviation has been shown to be a risky activity with potentially disastrous outcomes within both aviation security and aviation safety and is therefore underlain a risk regulation regime. Risk regulation is a method of risk governance, a way for (primarily) governments to handle a risky business instead of banning it altogether.

The main aim of this thesis is to explore the consequences of the risk regulating regime that has governed Norwegian aviation security since 9/11. One of the basic premises in this study has been that the organisation of aviation security in practice needed to be seen in relation to the regulation that frames it. In order to do so, I have applied an integrated approach concerning both the collection of empirical material and in the choice of the theory and literature to understand it through. By exploring the regulatory changes that occurred and their organisational applications, I will be able to offer insights into the consequences of the choice of regulatory type and hence point to how regulatory choice[15] may create constraints in the organisational setting of the airports.

One of my main concerns, when speaking of consequences of regulatory choice, is how it influences action. Simply put, we can say that the more prescriptive a regulation is, the less space the regulatee will have for

[15] In this thesis I use the term *choice* (i.e. regulatory choice and national strategic choice) to describe how Norway and Iceland have approached and handled the regulatory change in the EU. The Norwegian authorities did not refer to this situation in terms of choice, and the Icelandic authorities referred to it as a result of negotiating with the EU. Therefore, the term *choice* is mine and I apply it in a wide sense to indicate that the EU regulation was not imposed upon Norway in the exact form as it became implemented. E.g., according to interviewees at the CAA, Norway had never applied for any exemption as Iceland had done. This indicates that there have been choices in the implementation. This will also be described further in Chapter 5.

manoeuvring in relation to the regulation. Space in this connection therefore describes the possibilities the regulatee has for participation in developing, adapting and adjusting the regulation. To illustrate this, I have included a figure called 'Space for Action', which intends to depict this interconnection between prescription and action.

In this thesis, I have chosen to apply High Reliability Organisation theory (HRO theory) as a tool to understand the empirical material. HRO theory provides a way to understand organisations that handle risky technologies. Understanding organisations through the lens of HRO theory is intriguing because it provides a framework that can tell us something about the components that should be present in order to be highly reliable. In Chapter 1, I introduced Eede's definition of reliability: "Reliability is the system outcome that can be described as safe, effective and efficient, in terms of average and variance" (Eede, 2009, p. 5). In organisations with so much uncertainty that it can be difficult to evaluate the actual success of the system (as described in Chapter 1), HRO theory provides a way to evaluate whether the organisational processes in the organisation correspond to the processes that lead to high reliability. Therefore, theory that indicates how organisational reliability is enhanced and diminished will be highly applicable in settings that are otherwise difficult to evaluate.

This chapter is separated into two main parts. The first focuses on regulatory types and the regulation of risk. The objective of this part is to describe regulatory development throughout the last few decades, to describe the main regulatory types typical for risky industries and to discuss some of the critique (strengths and weaknesses) of the regulatory types. Because different types of regulation provide different possibilities for action, this chapter prepares the background for the connection between regulation and organisational possibilities, represented through the HRO theory.

The second main part of the chapter focuses on High Reliability Organisation theory: how it has evolved and has been applied in organisational research. I contrast it to its most commonly applied 'archenemy', the Normal Accidents Theory (NAT). In the literature, these two theories are often contrasted. Whereas HRO theory is considered a more 'positive' theory claiming that high levels of reliability are possible, NAT is portraying a more 'pessimistic' outlook in which accidents are normal and should be expected. By comparing the two theoretical approaches, however,

the main points in HRO theory emerge. In this part of the chapter, the concept of collective mindfulness is introduced in relation to HRO theory. According to HRO theorists, mindfulness is considered to be the hard-to-grasp asset of people's attention, which is important to maintain in order to operate with high reliability. The concept of mindfulness will be applied later in the thesis as a property highly entrusted to the regulatory type that constrains it.

Prior to the two main sections in this chapter, I first focus on some of the fundamental concepts in this thesis. The risk regulating regime of aviation security is closely aligned with the protection of values, not only in an economic sense but also in societal terms. I find it necessary to connect the understanding of security, risk and what constitutes a security risk closely to values, and I begin with this clarification and delineation.

3.2 Security, risk and security risks

The concepts of security and risk are central in this thesis. In what follows I outline how these concepts can be defined and understood and also how they relate to one another. The main aim of this part is to demonstrate the complexity of risk thinking and its definitions in that, depending on how one conceives risk and defines what constitutes security risks, a negotiation of values commences. This negotiation of values entails what to secure, how to secure it, defining what and who constitutes a risk and what the protection is worth (both in an economical and non-economical sense). I begin by defining *security* (seeing it in relation to safety) since it has been a term often applied quite freely and contextually independent. This clarification is necessary since safety and security are clearly separated in aviation. I then continue with the concepts of risk and security risk: how to understand and define them, especially in relation to values. I end this conceptual part of the chapter with a brief summary.

3.2.1 Security and safety

In its most basic form, security can be defined as a condition free from danger and being protected and kept safe (Der Derian, 1995). This is very similar to the basic definition one finds for the concept of safety. The concepts are, thus, often applied interchangeably. However, in certain contexts the concepts are used distinctly. Through a review of the existing definitions of

these concepts, Piètre-Cambacédès and Chaudet (2010) find that some characteristic distinctions can be identified to separate them. The one most relevant for this thesis is the *Malicious vs. Accidental* distinction, in which security addresses malicious risks and safety addresses purely accidental risks. Here, accidental is understood as "related to undesired events happening unexpectedly and unintentionally" (Piètre-Cambacédès & Chaudet, 2010, p. 59). Hence, we can say that the key term *intentionality* makes the difference, because when an action or attack is performed in order to intentionally cause harm, it is a security issue, but it is an accident and, thus, a safety issue when it is unintentionally causing harm.

Now we have delineated security (and safety) through the term intentionality. Risk is not a concept easily defined. This is reflected through the numerous definitions of risk that exist. What is risk, and how can we understand it and, finally, what is the relationship between risk and security? I will attempt to answer this below.

3.2.2 Risk

Risk is a phenomenon that has followed peoples' lives since, as Renn puts it: "human beings started to reflect [on] the possibility of their own death" (Renn, 1998, p. 5). However, what we call the 'modern' notion of risk reached the West some seven to eight hundred years ago (Bernstein, 1996). "[...] the serious study of risk began during the Renaissance, when people broke loose from the constraints of the past [...]. This was a time when much of the world was to be discovered and its resources exploited. It was a time of religious turmoil, nascent capitalism, and a vigorous approach to science and the future" (Bernstein, 1996, p. 3). However, Jaeger et al. (2001) pose the thought that, while the concept has been implicated in practices of insurance and investments for centuries, "the systematic application of risk to evaluate the technologies and products of high modernism is a child of the late 20th century" (Jaeger, et al., 2001, p. 9). Risk, as we know it, developed as a response to the acknowledgment of continuous larger technologies that are both more complex and more dangerous (ibid).

The eagerness to define what risk was grew along with the interest in evaluating risks. Although there are numerous definitions of risk, they have in common that they presuppose a distinction between predetermination and possibility. Because risk implies that an outcome can happen and that it

occurs without predetermined certainty, it necessarily also implies uncertainty (Jaeger, et al., 2001). I have chosen to use Rosa's definition of risk as a point of departure here, where risk is: "a situation or event in which something of human value (including humans themselves) has been put at stake and where the outcome is uncertain" (Rosa, 1998, p. 28). When we see this definition in relation to other definitions of risk – for example Graham and Wiener (1995) who defines risk as "the probability of an adverse outcome" (Graham & Wiener, 1995, p. 30) – we see that Rosa includes the value aspect in his definition. In relation to the themes in this thesis, values (both economical and societal) are intrinsically a part of the protection of civil aviation and, hence, there is a necessity to include values in the risk definition, also. Thus, I find definitions as Graham and Wiener's to be somewhat one-dimensional. Although I consider Rosa's definition to be more than sufficient for the purpose of this thesis, I also find Aven and Renn's (2009) evaluation of a selection of risk definitions to be of interest, since they extend Rosa's original definition even further. They suggest the following definition where: "Risk refers to uncertainty about and severity of the events and consequences (or outcomes) of an activity with respect to something that humans value" (Aven & Renn, 2009, p. 13). Although Aven and Renn's definition is quite similar to Rosa's, they claim that Rosa's definition of risk expresses an ontology independent of our knowledge and perceptions. They assert that "in our concept, risk does not exist independent of the assessor, as the uncertainties need to be assessed by somebody. Consider [...] lung cancer [...]. Would cancer exist if the conditions of cancer – the uncontrolled growth of cells – have not been detected [...]? Yes, cancer exists, but this is not a risk according to our definition" (Aven & Renn, 2009, p. 16). Hence, according to this definition, risk becomes a risk only after being defined as such.

We have now established that risk is closely connected to values and is dependent on an assessor. This leads us over to the objectivity and subjectivity of risk connected to security.

3.2.3 Risk, security and security risks

As an analytical concept, risk has developed significantly during the past decades. It developed as an attempt to predict some of the consequences of events happening in society that were induced by ourselves and the environment. During the development of risk as an analytical entity, a strong

positivist tradition grew, treating risk as an objective 'truth' out there, acting 'on its own'. Simultaneously, the social sciences began to enter the field of risk research and began questioning some of the inherent assumptions upon which the technical analysis builds. The main contribution of the social sciences was to introduce the value aspect of risk. They asserted that risk was not, and could not be, value free, because what people perceive as undesirable depends on their own values and preferences (Renn, 1998). A highly relativist approach then evolved in response to the technical, positivist understanding of risk. In this approach, risk can almost be reduced to mere perceptions in the minds of individuals (Engen, Aven, & Pettersen, 2010). In the attempt to unite the different approaches to risk, directions such as 'scientific proceduralism' (Shrader-Frechette, 1991) and 'Reconstructed Realism' (Rosa, 1998) were forwarded. These contributions tried to find a middle way between the cultural relativists (often represented by Mary Douglas and Aron Wildavsky) who "believe that risks are social constructs" (Shrader-Frechette, 1991, p. 8) and Naïve Positivists (represented by Chauncey Starr and Christopher Whipple (Starr & Whipple, 1980)), who "[...] maintain that risk evaluation is objective in the sense that different risks may be evaluated according to the same rule" (Shrader-Frechette, 1991, p. 8).

In their article on security risks, Engen et al. (2010) look at theories of risk that may be applied to security risks. Here they draw on the review by Debora Lupton (1999), in which she describes "three major diverging sociological perspectives on how risk is conceptualised as a phenomenon" (Engen, et al., 2010). She presents the 'cultural/symbolic' (cultural relativist) approach, the 'risk society' approach, and the 'governmentality' approach. The cultural/symbolic approach take a strong constructionist approach in emphasising the role social and cultural processes take in identifying what risk is (Lupton, 1999 in Engen, et al., 2010). The 'Risk Society' theory represented by Ulrich Beck asserts that modern society is characterised by incalculable and uninsurable risks (C.A.S.E. Collective, 2006). "According to Beck, the 9/11 terrorist events escaped rational predictions and have displayed the limits of modern insurance technology [...] In the risk society thesis, hazards and insecurities are viewed as inevitable structural threats" (C.A.S.E. Collective, 2006, p. 468). The third approach, 'governmentality', draws on the work of Foucault, in which risk is seen as a way to order reality. Here risk is seen as "a way of representing events in a certain form so they might be made

governable in particular ways, with particular technologies and for particular goals" (Dean, 1999 in C.A.S.E. Collective, 2006, p. 177). In Lupton's review of these three sociological perspectives, she explains that "The risk society theorists tend to take a fairly realist approach to risk in their emphasis on how risks have proliferated in late modern Western societies. From their perspective, risks are objective and real, although how we respond to them is always mediated through social and cultural processes. The cultural/symbolic perspective takes a somewhat more strongly social constructionist approach in emphasizing to a greater extent the role played by social and cultural processes in identifying what is risk. The governmentality perspective adopts the strongest social constructionist approach of the three perspectives. Nothing is seen to be a risk in itself; rather, events are constructed as risks through discourse. While all sorts of potential dangers or hazards exist in the world, only a small number of them are singled out and dealt with as 'risks'" (Lupton, 1999 in Engen, et al., 2010, p. 1112).

On the basis of these approaches to risk, Engen et al. (2010) proposes a fourth approach to risk that they label 'Critical Realist'. They suggest that the approaches of Schrader-Frechette (1991) and Rosa (1998) may represent this critical realist approach, "due to the approaches advocating realist social theories when conceptualizing risk as a social phenomenon while sustaining an argument of hermeneutics in their epistemologies, meaning that no risk evaluation is value free" (Engen, et al., 2010, p. 1113). They claim that although security risks are hard to pin down, since security risk knowledge approaches the total uncertain, they are to some extent real, and they have to be managed as such. "Unless, there would be no meaning of the term risk at all" (Engen, et al., 2010, p. 1114). Connecting this with what was outlined above; Engen et al. include the work of Aven and Renn, which situates their definition on risk in a terrorist context. They claim that risks do not exist independently without an assessor. Uncertainties must always be assessed by someone. Engen et al. sum it up by asking, "Does a terrorist exist if the conditions of terrorism – such as social forces and intentional actors – have not been detected? Yes, the terrorist exists, but it is not a risk. Risk requires a knowledge construct of uncertainty. This construction can be based on observations and/or causal knowledge of the relationship between specific convictions and actions" (Engen, et al., 2010, p. 1115).

It may be time to ask how all this relates to security in aviation and the main threat to it, which is terrorism and intentional attacks. Pettersen et al. (2009) look at the response society has made through the 'new' security threats that the world has been faced with through wilful attacks by using the term 'security risks'. "Security risks concern not only the identification of potential threats to people and objects [...] Security risks also encompass the value systems, social forces, and social structures that contribute to our understanding [of] and reactions to both hope and fears" (Pettersen, et al., 2009, p. 1). They also bring in the fact that security risks are issues at all levels of society and, therefore, are highly politicised issues in which "states, business, industry professionals and private stakeholders are engaged in setting the risk agenda and in different ways affecting whether and how security risks are recognised, categorised and acted upon" (Pettersen, et al., 2009, p. 1).

3.2.4 Security risks and securitisation theory

If we take a closer look at the 'new' security risks, as explained above by Pettersen et al. (2009), in which these 'encompass the value systems, social forces, and social structures', these risks do not seem to deviate much from other types of risks. However, in the continuance, they write that these elements 'contribute to our understanding [of] and reactions to both hope and fears', which I understand to play on the unpredictability of terrorist and/or intentional attacks. It follows Burgess' point, as outlined in the introduction, that the aim of terrorism is not about disrupting societal services. The aim is to achieve a *loss of confidence* in these services and to produce fear of future threats. As Burgess points out, "The insecurity of our time is not the security event, the catastrophe itself, though this can be a corroborating factor, but the *thought* of the catastrophe, the fantasy of harm, careening toward us from the future" (Burgess, 2011, p. 7 [emphasis original]). The main intention is, thus, to create insecurity. One part of this insecurity is reduced through analysis and planning, which forms the basis for insurance that reduces the insecurity through compensation. The other part of insecurity is irreducible, because it revolves around what counts in life (Burgess, 2011). This is what Burges calls 'radical insecurity' – the unforeseeable. It is this eventuality that provides the only basis for evaluating how we should live in the face of future threats (ibid). Burgess concludes, "This sense of insecurity is therefore the site of a

decision about what we value in human terms, and therefore it is a decision about our own identity, about who we are and what we want, what is dispensable and what is indispensable" (Burgess, 2011, p. 5 [emphasis original]).

This poses a new issue if we connect this complexity of security risks and its considerable proportion of uncertainty with Aven and Renn's definition of risk, which necessitates an assessor. As Pettersen et al. (2009) point out, defining security risks can be a highly politicised issue. In this 'problematisation' of the definitional power of risk, it becomes easy to connect this to the 'governmentality' perspective of risk described by C.A.S.E and Lupton above. Although the aim here is not to go into this vast body of literature, it is interesting to look at one of the main contributions in this literature, 'Securitisation' theory. The main theme of this theoretical approach is to underscore that the 'speech act' of labelling something a security problem opens it up to the possibility of handling it differently than other societal 'problems'. Wæver, as a representative from the Copenhagen School[16], explains that it is the utterance itself, the 'speech-act' itself, that moves an issue from a 'normal sphere' to a 'security sphere'. In other words, "The idea of securitization describes processes in which the socially and political successful 'speech act' of labelling an issue a 'security issue' removes it from the realm of normal day-to-day politics, casting it as an 'existential threat' calling for and justifying extreme measures" (Williams, 1998 in C.A.S.E. Collective, 2006, p. 453). This connects well with what Salter calls the 'dispositif of security' (Salter, 2008). "[...] the dispositif of security defines the objects of security. It defines what might be governed in the name of security, or what might be defined as security" (Salter, 2008, p. 249). The difference between the security dispositif and a regular legal prohibition or disciplinary mechanism is that the security dispositif make certain fields amendable to specific types of governance. Salter concludes that "the dispositif of security is able to justify much more control by corporate, government, and private actors" (Salter, 2008, p. 262 [emphasis original]).

[16] The Copenhagen School is regarded as one of the main contributors to Critical Approaches to Security in Europe (C.A.S.E.) alongside the Aberystwyth and Paris Schools. The term 'schools' was applied to explain different contributions when mapping the field of security studies (Wæver, 2004).

3.2.5 Summary: security, risk and security risks

By differentiating security and safety issues according to the property of intentionality, security risk emerges as its own 'category' of risk. The understanding of risk in the literature has moved from the objectivst view of risk as objective and external to the human mind to the extreme constructivist view in which risk does not exist, it emerges through discourse. The approach taken by Engen et al. (2010), the 'critical realist' approach, establishes that although security risks approach the almost totally uncertain, they are to some extent real, and it is, therefore, necessary to treat them as such (Engen, et al., 2010; Pettersen, et al., 2009). They connect this to Aven and Renn's (2009) definition of risk, which requires an assessor to determine the difference between risks and threats. It is this property of 'assessorship' that is problematic, because, in the words of Pettersen et al., it is "a highly politicised issue where states, business, industry professionals and private stakeholders are engaged in setting the risk agenda and in different ways affecting whether and how security risks are recognised, categorised and acted upon" (Pettersen, et al., 2009, p. 1). This is further elaborated by securitisation theory, which points at this problematique of how calling something a security issue moves it out of 'normal politics' and into the form of the 'politics of exceptionalism'. This is further elaborated by Salter and his Foucauldian term, the 'security dispositif', which describes the sphere in which definitional power is held to state what and how security problems should be governed.

The concepts presented here are highly complex. They demonstrate how difficult it is to handle issues regarding security risks, and also how difficult it is to assess this handling. One of the most essential points, in my view, is the importance of power in the assessments of converting an issue into a security issue. This also places the risk regulation of security in another light because in such a complex environment with so high levels of uncertainty, there is the possibility that the defined risks that has motivated and informed the security risk governance is well fitted and appropriate, but it may also be that it may not be fitting the actual risks and threats 'out there'. It provides a nuancing into the conception of the systems we create to protect us and that these are continually evolving and not static or assessed once and for all.

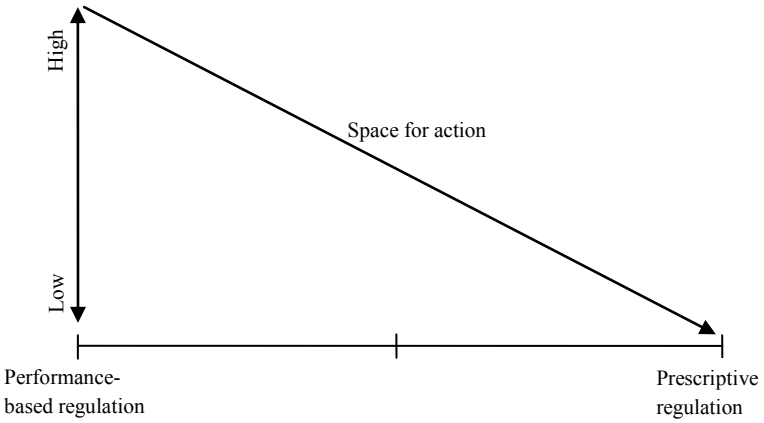
I have now created an outline of the complex issues of risk and security risks. As we now continue with regulation, the examination made above

provides a foundation for examining regulation, especially the complexity in the regulation of risky industries.

3.3 Regulation

Aviation is and has been a heavily regulated field. In industries that may produce fatal consequences, regulation has worked as an attempt to control the risks to which the industry is prone. Instead of banning the risky industry, the attempt has been to reduce the risks to an acceptable level. After 9/11/01, a major expansion occurred regarding the amount of regulation in aviation security. It expanded, became more detail oriented and turned into a highly prescriptive regulatory regime. While the previous regulatory system was oriented around many of the same documents that later worked as the foundation for formulating the post-9/11 security regulation, the rigidity, specificity and detail-level increased. In this thesis, I have chosen to contrast two regulatory types that can be considered as pertaining to two sides of a scale: the prescriptive and the performance-based regulatory types. The scale should be considered as a theoretical one, in which the types of regulation are 'ideal types'. Real regulation will be found somewhere between the two types. What differentiates these two regulatory types is primarily the possible 'space for action' for the regulatee (Engen et al., 2013). In short, we can say that the more the cursor moves in the direction of prescription, the more the space for action shrinks (see fig. 2 below). Consequently, the more it moves in direction of goal orientation, the more the space for action expands.

Figure 2: Regulatory types' influence on Space for Action



There are clear benefits and disadvantages for different kinds of regulation, as well as great differences in possibilities and constraints. This part of the chapter aims, therefore, to clarify how regulation can be conceived and defined as well as to contrast the two regulatory types by describing their development and application. This will provide tools for understanding the background for the regulatory environment of aviation security described in Chapter 5.

3.3.1 What is regulation?

In simple form we can say that to regulate is to create rules and to propagate them (Brunsson & Jacobsson, 2000). Often regulation is conceived as restricting behaviour in order to prevent certain undesirable activities (Baldwin, Scott, & Hood, 1998), although a broader view of regulation is that it not only prevents but also facilitates or enables (ibid). According to Hood (2001), there should at least be three core functions present in a control system, which a regulatory system can be understood as, "There must be some capacity for *standard-setting*, to allow a distinction to be made between more or less preferred states of the system. There must also be a capacity for *information-gathering* or monitoring to produce knowledge about current or changing states of the system. On top of that must be some capacity for *behaviour-modification* to change the state of the system" (Hood, et al., 2001,

p. 23). Thus, instead of searching for the 'correct' definition of regulation, we can say what a regulatory system should contain.

Now we have established a basic description of what a regulation is. Is there any difference between the regulation of safety/security[17] and other types of regulation? According to Hopkins and Hale (2002) it is, in many regulatory areas, possible to make requirements of direct outcomes, whether fishing quotas, taxation of people and businesses or price fixing agreements. In safety, this is not possible, since the objective is to prevent harm – harm to workers, passengers, local residents, etc. (Hopkins & Hale, 2002). In risky industries potential harm always goes hand in hand with the industry, or as Wildavsky claims, "there can be no safety without risk" (Wildavsky, 1988, p. 1). It is, however, deemed acceptable, as there is a societal gain in the industry. Since we cannot separate the risk from the industry, it will not be possible to impose a regulation that demands that no harm should be done. "All that can reasonably be required of those who control our workplaces, who transport us or who make goods and services we consume is that they *minimize* the risks to which they subject us" (Hopkins & Hale, 2002, p. 3). In order to minimise that risk, regulatory systems are created in order to direct how this should be done. The two main directions of regulatory types are usually contrasted by opposing prescriptive regulation with performance-based (goal oriented) regulation. I will follow that tradition and begin by outlining the two regulatory types.

3.3.2 Prescriptive regulation

Prescriptive regulation revolves around specifying and prescribing rules and standards, typically in a detailed fashion. Abiding by the rules and standards are presumed to provide the desired outcome in regards to regulatory goals. Prescriptive regulation as a regulatory type was developed in response to the industrial revolution. It required the risk creators to adhere to very specific, technical requirements, which could be anything from defining ladder heights to describing specific procedures. After technology developed further, the volume of the prescriptive regulations increased exponentially.

[17] In this connection, the regulation of security and safety is juxtaposed since their goal is the avoidance of unwanted incidents with large consequences.

This led to a system that has been described as "unwieldy, unenforceable and unworkable" (Hopkins & Hale, 2002, p. 4).

During the 1970s, traditional regulation of safety went through a so-called 'regulatory crisis'. "There was a strong deregulatory rhetoric, centring on alleged over-regulation, legalism, inflexibility and an alleged absence of attention being paid to the costs of regulation" (Hutter, 2005, p. 1). The Robens Report of 1972 recommended that "rather than specifying standards and procedures to enhance safety, legislation should specify the policy goal itself – safety, and require employers to ensure the safety of their workers, so far as reasonably practicable" (Robbens (1970) in Hopkins & Hale, 2002, p. 4). Reports like the Robens and Cullen Report (1990; 1972) became major drivers in regulatory development in the UK, corresponding development in the US (as exemplified by Reagan's rhetoric of 'regulatory relief' (Hutter, 2005)) and the EU quickly followed. During this development, shortcomings with prescriptive safety regulation began to appear: First, in prescriptive regulation, the service provider is only obliged to follow prescribed actions and is, therefore, released of legal responsibilities beyond that. Second, prescriptive regulation tends to be retrospective, a product of past experiences, and can therefore be inappropriate and/or create unnecessary dangers in technically innovative industries. Third, the regulation provides best engineering practices from the time period they are written and becomes deficient in changing industries (Penny, Eaton, Bishop, & Bloomfield, 2001).

Wilpert points to another type of problematique related to prescriptive regulation. He claims that a fundamental problem of compliance orientation is that, in order to be effective, it would require a theoretical insight and understanding of *how* the prescribed norm affects (obedient) behaviour. This cannot be systematically controlled. Consequences of this may be:

- Inundation of regulations, proliferation of regulatory requirements;
- Increase of conflict relations and distrust between regulator and regulated;
- Information asymmetries between regulated and regulator since regulated is closer to emerging problems;
- Increased de-motivation and tendency to unreflective compliance with rules;

- Reduced learning for all parties involved;
- Inflexibility due to lengthy rule making processes;
- Increase of operational responsibility for the regulator with potential liabilities.

(Wilpert, 2008, p. 373)

This leads to a syndrome that has been called 'adversarial legalism' (Kagan (1999) in Wilpert, 2008) which mainly points at practices in which policy-making litigation is dominated by lawyers and not bureaucrats in an 'anti-adversarial' manner; expressed differently, non-negotiable practices with excessive faith in compliance. Wilpert's concern is mainly about the long tradition of engineering science practices that is mainly oriented around the control of technical components and of the processes that follow natural laws. His point is that "Natural science paradigms, however, appear inadequate for the intention to control human factors, organization and management" (Wilpert, 2008, p. 373).

3.3.3 Performance-based (goal oriented) regulation

As previously described, a movement away from prescriptive regulations took place as the shortcomings of this type of regulation became more evident. Hand in hand with government reform that has occurred during recent decades, there have been reforms of the traditional ways of achieving regulatory goals (May, 2007). This has given way to experimentation with other approaches to regulation, such as (among others) *voluntary approaches*, in which industry and government cooperates in making codes of practice; *self-auditing approaches*, in which industries assess themselves; and *performance-based approaches* that regulate for goals rather than prescribing specified procedures and technologies (May, 2007). In relation to the regulation of safety industries or high-hazard industries, prescription or performance-based regulation has been prominent (sometimes in combination).

The regulatory outcome is specified in a performance-based regulation. It emphasises the desired result rather than the exact procedures to achieve it, leaving it more to the regulated to determine how to achieve the goal (May, 2007). "The central change under the performance-based approach is the

attention to outcomes as part of regulatory rules and standards" (May, 2007, p. 10). Kordek and Salvi (2009) provide the following definition of goal-based regulation: "[it is the] development and implementation of lawful texts which prescribe objectives and which leave the choice of the means to reach them (Kordek & Salvi, 2009, p. 6).

Table 1: Comparison of regulatory regimes

	Regulatory Regime	
	Prescriptive regulation	Performance-based regulation
Regulatory foci	Prescribed action	Results or outcomes
Compliance determination	Adherence to prescribed actions	Achievement of desired results
Nature of rules and standards	Particularistic and detailed specifications	Goal-oriented outcome specifications
Basis for achieving regulated goals	Adherence to prescriptions assumed to meet goals	Regulatory goals are embedded in the results orientation
Examples	Dominant regulatory approach in the USA for environmental and social regulation	Aspects of air and water quality, building and fire safety, energy, and pipeline safety

Modified after May (2007, p. 10)

There are identified several advantages of implementing a more performance-based regulatory approach. One of the main benefits is that it demands a greater engagement from the regulated entity, since the responsibility to achieve the stated goal is put on the regulated. The regulated needs to demonstrate to the regulator that the goal has been satisfactorily met (Jenkins, 2012). "A goal based route requires engagement with the objective, and an active demonstration that the goal has been met" (Jenkins, 2012, p. 2). This is also why this type of regulation is sometimes called self-regulation, since it is up to the regulated entities to create their own set of rules and standards and to police and monitor their own performance regarding those standards (Kirwan, Hale, & Hopkins, 2002a). Another advantage is that performance-based regulation may circumvent complacency. Complacency may arise within a prescriptive system, since the predefined rules, standards

and check-lists seem to conduce to an implicitly good safety standard. Thus, trust is placed on bureaucratic control to determine the adequacy of safety (May, 2007). The performance-based approach is also more flexible, because it offers the possibility of using alternative means to reach the objectives (May, 2003). This will be important for the spending of resources, since performance-based regulation seeks to avoid the regulatory pitfalls of unnecessary and/or inappropriate requirements (May, 2007).

3.3.3.1 Risk-based regulation

In an attempt to simplify a quite complex web of regulatory approaches, I have chosen to see risk-based regulation as pertaining to the category of performance-based regulation. This is mainly because, like other performance-based regulations, this approach evolved from the 'regulatory crisis' (as outlined above) in the 1980s and 1990s. As asserted by Peterson and Fensling, "Risk-based regulation is part of the movement away from prescriptive, command-and-control regulation, and toward outcome, or performance-based regulation" (Peterson & Fensling, 2011, p. 6). Risk-based regulation can be defined as "the application of a systematic framework that prioritises regulatory activities and deployment of regulators' resources on evidence-based assessment of risk" (Baldwin and Black (2007) in Peterson & Fensling, 2011, p. 2). Risk-based regulation includes several approaches that, at a minimum, entail the use of technical, risk-based tools (Hutter, 2005). Risk-based regulation leans on a cost-benefit perspective that acknowledges that resources are always limited and that resources that are applied at one place will not be available for use elsewhere (Bounds, 2010). An efficient use of regulatory resources is needed to maximise the benefits of regulation and, hence, its benefits for society. This implies applying the regulatory resources where they can achieve maximum benefit to society (Bounds, 2010). Risk assessments should be used to identify where the resources are best applied. "A risk-based approach to regulation explicitly acknowledges that the government cannot remove all risks and that regulatory action, when taken, should be proportionate, targeted and based on an assessment of the nature and magnitude of the risk and of the likelihood that the regulation will be successful in achieving its aims" (Bounds, 2010, p. 16). The regulatory response should, therefore, be informed by an assessment of the probability of

the harm, and where this cannot be calculated, a rational and transparent consideration of other factors should be considered (Bounds, 2010).

The advantages of a risk-based regulatory approach are the same as for other performance-based regulations. But one of the major arguments for applying the risk-based type of performance-based regulations is how it advocates the use (or avoids the faulty use) of resources within safety industries. Bounds points to the fact that sometimes governments respond to hazardous events with reactive regulation. This often happens in the aftermath of events that receive much media and political attention. The governments then draft regulations that give an impression to the public that the causes of the problem have been addressed, but this may be a faulty impression when the regulations are neither effective nor able to address the risk at hand (Bounds, 2010). This kind of regulatory failure has costs, the most obvious being that resources are spent in an inefficient area. But a consequence of this, according to Bounds, can be that "in a perverse way, poorly designed regulation that fails to address risk at the right level in society may actually increase the vulnerability of society creating situations of moral hazard and inhibiting innovation through the development of new and better methods to reduce risk" (Bounds, 2010, p. 17).

3.3.3.2 Regulation revisited

Regulation is no simple task, and the regulatory types presented here can be considered as ideal types. The critique of the prescriptive type of regulation runs through the account here, since it was the first kind of regulation that evolved with the industrial revolution. Since then, this form of regulation has met hard criticism, and alternative types of regulation evolved from that. It is possible to see the performance-based regulation as a reaction to prescriptive regulations that have been perceived as overly rigid and inflexible (May, 2003). Although there are several advantages given for choosing a more performance-based regulation, this is by no means unproblematic. The potential benefits of this type of regulation revolves around not only increased effectiveness and flexibility but also better potential for innovation and reduced compliance costs for the regulated. The disadvantages, however, may be inconsistency in the application of rules and increased costs to the governmental regulators. The latter stems from the fact that while performance-based regulation may be less costly to develop, they may be

more expensive to enforce because of the greater vagueness of performance standards, together with the regulator's possible lack of expertise (May, 2003). Risk-based regulation is usually criticised by the cost/benefit approach, since indirect costs and benefits are seldom considered (Hutter, 2005). In addition, it will always be difficult to choose between competing analyses, as well as deciding how much weight one should give to public fears (which are more subjective and, hence, difficult to include in a rational cost/benefit analysis). Nevertheless, in many cases, it is not a question of either/or when it comes to regulation. Instead, regulation in practice can often be a combination of prescriptive and performance-based regulations.

3.3.4 Prescription, proceduralisation and the 'human component'

Prescriptive regulation is closely connected to what has been labelled 'proceduralisation'. Bourrier and Bieder describes proceduralisation as meaning two things "firstly an aim at defining precise and quantified safety objectives, secondly an aim at defining a process describing and prescribing at the same time how to achieve such objectives" (Bieder & Bourrier, 2013a, p. 3). While prescriptive regulation is connected to the regulatory reality, proceduralisation frames a way of performing, in job tasks and practical performance. Within the frames of this study, we can say that the prescriptive regulation describe the framework where organisations have to operate within, while it is the local regulation and work instructions at the airports that is the object of proceduralisation.

Within a prescriptive type of regulation, there will be a great deal of detailed specification of procedures. This is also the essence of proceduralisation. Procedures have become key features of modern organisations, but within the management of safety this has been predominant (Bieder & Bourrier, 2013a). Prescriptive rules have held an important role in the creation of systems that have searched for safer performance based on assessments of past experiences (Moore, 2005). This is also true for proceduralisation, which has been crucial in the construction of, among others, aviation safety practices (Bieder & Bourrier, 2013b; Pélegrin, 2013). The origin of proceduralisation is responses of previous experiences. As Bieder and Bourrier describe "It was [...] the only response that made sense in a world where beliefs on safety were (and still are in many places) based on a model which assumes that safety results from reliable equipment, good

procedures and processes, well-behaved operators and well designed organizations" (Bieder & Bourrier, 2013a, p. 3). What is it about prescribing procedures that attracts safety industries so much? There are several advantages of applying procedures and they largely follow the advantages found in prescriptive regulation; consistency and control. By describing, often in detail, how procedures should be performed, little room is given for variable performance. It reduces uncertainty in normal and abnormal situations and hence risk (Pélegrin, 2013). It is simultaneously easier to control compliance and to audit performance through this way of organising job tasks. However, the application of procedures alone does not ensure safety (Fucks & Dien, 2013). Fucks and Dien refer to Bourrier (1999) who list six main reasons as to why it is difficult to solely rely on procedures "[...] structural incompleteness of the rule, process and persons variability, undefined use conditions (implicit model of users taken into account by the designer of procedures), application conditions not always defined (specific situations can make procedure poorly adapted), organizational variability and reference to ideal situations [...]" (Fucks & Dien, 2013, p. 27). In addition, the excessive use of procedures and detailed descriptions of work tasks often pacifies people since the focus is on compliance with rules and procedures and not the end goal (safety) itself. Procedures are ordinarily applied in two ways (not exclusive) where procedures are either used as an aid or tool, or they are used as rules that one is bound to follow (Fucks & Dien, 2013). In organisations that coercively apply procedures, they tend to turn workers and managers into 'little soldiers' not acting until orders are given (ibid). The application of rules as 'constraint' particularly influences work behaviour and result in a simple criteria: "if you act within the boundaries (the prescriptions) you are right and if you act outside them, you are wrong" (Fucks & Dien, 2013, p. 33).

What we see, then, is that prescription and proceduralisation may lead to uniform and consistent behaviour in organisations. What seems to be more or less absent in this logic is the 'human component' of the system. Does this mean that humans are a liability in high-risk systems? Variable performance has in high-risk systems often been connected to 'deviant human behaviour'. Prescriptive regulation and heavy proceduralisation has therefore been used to 'protect' the system from variance caused by people. Rigid systems are constructed around a conviction that the prescribing of all procedures in detail

will ensure safety. Hollnagel (2008) calls this the 'error-counting paradigm', where "this paradigm often prescribed automation as a means to safeguard the system from the people in it [...;] work on safety comprised protecting the system from unreliable, erratic, and limited human components (or more clearly, protecting the people at the blunt end – in their role as managers, regulators and consumers of systems – from unreliable 'other' people at the sharp end – who operate and maintain those systems)" (Hollnagel, Nemeth, & Dekker, 2008, p. 4). Hollnagel continues by saying that research shows that humans are actually found to be providers of safety through their abilities to adapt when it comes to unforeseen events, gaps in the system and change (Hollnagel, et al., 2008). This way, we see two perspectives on the role of humans in high-risk systems; the first is represented by the prescriptive systems which are based on mistrust and the second, more positive view, is that humans actually contribute to safety. How this latter perspective may contribute to safety will be further elaborated below in relation to HRO theory and collective mindfulness.

3.4 High Reliability Organisation theory (HRO theory)

New kinds of risks have accompanied the development of new science and technologies. Through major risk events like Three Mile Island (1979) and Chernobyl (1986), the new scientific and technological developments were fundamentally questioned and led to great public concern (Hutter, 2010). There will always be a balance in such cost-benefit equations between the possible profitable outcomes the technology brings and the risk and harm they may cause society. "Science and technology simultaneously explore new innovative avenues which hold potential to advance our lives in positive ways but which may also present us with new risks or uncertainty" (Hutter, 2010, p. 5). In designing organisations operating in high risk environments, the possibility to create reliable systems therefore becomes crucial. Reliability can be defined in several ways, depending on the discipline, context and worldview (Eede, 2009). Earlier in this chapter, Eede's definition of reliability has been applied. To compliment this definition we can add Weick and Sutcliffe's explanation of reliability which is "what one can count upon not to fail in doing what is expected" (Weick & Sutcliffe, 2001, p. 91), while another definition defines reliability as the "unusual capacity to produce collective outcomes of a certain minimum quality repeatedly (Hannan &

Friedman, (1984) in Weick, et al., 1999, p. 86). In this thesis, I choose to lean on Eede's definition that "Reliability is the system outcome that can be described as safe, effective and efficient, in terms of average and variance" (Eede, 2009, p. 5). Average refers to an expectation that a system works 'most of the time' and variance refers to expected, unreliable occurrences[18].

In the aftermath of some of the great organisational disasters, such as the ones mentioned above, there were theoretical developments in the approaches to safety and reliability in high technological systems. This was the result of the acknowledgement that organisations played a critical role in the understanding and the management of risks in modern societies (Hutter, 2010). This led to a focus on studying organisations that could demonstrate reliability under trying conditions, which has been labelled HRO theory.

3.4.1 High Reliability Organisations and Normal Accidents Theory

High Reliability Organisation theory (HRO theory) is often contrasted to Charles Perrow's Normal Accidents Theory (NAT) since the theories usefully stand in stark contrast to each other and have also dominated the discussion of organisational reliability since the 1980s (Eede, 2009). HRO stands as the positive theory that claims that accidents in complex technological systems can be prevented, while NAT presents a more pessimistic view where such accidents are inevitable. HRO theory developed through different stages. In what follows, I will outline the main directions within HRO theory and finalise it with a contrasting of the HRO and NAT approaches to organisational reliability. Since Normal Accidents Theory is not my main concern but is used more here as a contrast to the HRO theory, the main focus will be given to HRO theory, and I will just outline the main points of NAT below.

3.4.1.1 HRO background

HRO theory was originally developed by a group of scholars who were interested in organisations operating in high risk environments where the outcomes of accidents could be catastrophic. These scholars were in essential

[18] For further elaboration of average reliability and variance in reliability, see Eede (2009) pps. 3-5.

agreement that "serious accidents with hazardous technologies can be prevented through intelligent organizational design and management" (Sagan, 1993, p. 14). According to Eede (2009), the development of the HRO theory can be seen as a three step process. The first one was created by Joseph Morone and Edward Woodhouse (1986), who studied the management of toxic chemicals, nuclear power and genetic engineering and found that the safety records were surprisingly good. Although they acknowledge that there is always ample room for improvement in safety measures, they also state that "given the challenge posed by modern technologies, the record to date is surprisingly good: despite dire warnings, no catastrophes have occurred in the United States" (Morone & Woodhouse, 1986, p. 5)[19]. This good record of safety could be, according to the authors, "[...] a systematic product of human actions – the result of a deliberate process by which risks are monitored, evaluated, and reduced" (Morone & Woodhouse, 1986, p. 8). Their focus worked mainly around the identification of the processes and strategies in the organisations that produced the good safety record.

The second major approach is the 'anticipation' and 'resilience' strategies in Aaron Wildavsky's well-known 1988 book, "Searching for Safety" (Wildavsky, 1988). Anticipation describes a strategy of predicting and preventing harm before it has occurred. Resilience is the effort of 'bouncing back' after an accident has occurred. Wildavsky's main focus was to examine the cost and benefits for these two strategies, claiming that all managing of risk became optimal through a mix of anticipation and resilience (Sagan, 1993).

The third approach originated at the University of California, Berkeley, which has also lent its name to the group that was later called The Berkeley Group. The roots of this approach began with the work of the two approaches described above, with Marone and Woodhouse on one side and Wildavsky on the other (Eede, 2009). Based on their work, the founders of The Berkeley group, Karlene Roberts, Todd LaPorte, and Gene Rochlin, fully developed the HRO theory (ibid). They performed empirical research of especially three hazardous organisations: the air traffic controllers, the Pacific Gas and

[19] Morone and Woodhouse consider Three Mile Island to be the worst reactor mishap in the American nuclear industry but more as a financial disaster than a nuclear disaster (Morone & Woodhouse, 1986, p. 8).

Electric Company that includes the facilities of the Diablo Canyon nuclear power plant, and flight deck operations on two US Navy aircraft carriers. The Berkeley Group argued that these organisations were able to perform in nearly error free operations (Sagan, 1993). Through their research, they maintained that "we have begun to discover the degree and character of effort necessary to overcome the inherent limitations to securing consistent, failure free operations in complex social organizations" (LaPorte (1991) in Sagan, 1993, p. 15). These organisations were, therefore, seen as providers of important lessons in the management of other hazardous organisations. "Most of the characteristics identified here should operate in most organisations that require advanced technologies and in which the cost of error is so great that it needs to be avoided altogether" (Roberts (1989) in Sagan, 1993, p. 16).

These three approaches have focused upon different kinds of organisations, and they also diverge on different aspects of explanations and prescription, but they share the underlying assumptions about how these organisations function plus a set of four traits considered to contribute to the high degrees of safety. These traits are:

- Leadership objectives: where political elites and organisation leaders place a high priority on safety and reliability.
- The need for redundancy: where significant levels of redundancy exist, permitting backup or overlapping units to compensate for failures.
- Decentralisation: where error rates are reduced through decentralisation of authority, strong organisational culture, and continuous operations and training, and
- Organisational learning: This takes place through a trial-and-error process, supplemented by anticipation and simulation.

(Sagan, 1993)

These four factors constitute "a route to extremely reliable operations even with highly hazardous technologies" (Sagan, 1993, p. 17). This is due to the fact that these conditions have been witnessed in a number of the organisations investigated. The theory is, therefore, that if these conditions exist in an organisation, it will be possible to prevent serious accidents and

catastrophes. “While the high reliability theorists do not state what precise amounts and mixtures of these factors are necessary for operational success with hazardous technologies, their overall optimism is clear. Properly designed and well-managed organisations can safely operate even the most hazardous technologies (Sagan, 1993, p. 28).

3.4.1.2 The Berkeley School and the Michigan School

Building upon the work of Morone, Woodhouse and Wildavsky, The Berkeley Group developed the HRO theory. What differentiated them from their predecessors was the organisational perspective to organisational reliability (Eede, 2009). The Michigan School was also preoccupied with HRO theory, but their theoretical dimension was largely extended on Karl Weick’s Sensemaking notion (Eede, 2009). “Sensemaking is the process of creating a mental model of a situation, particularly when this situation is ambiguous” (Eede, 2009, p. 61). It is “a motivated, continuous effort to understand connections (which can be among people, places and events) in order to anticipate their trajectories and act effectively” (Klein, Moon & Hoffman (2006) in Eede, 2009, p. 61). Some of the main contributions of the Michigan school have been their introduction of “mindfulness” (which will be elaborated further below) and “resilience”. The main idea of the mindfulness approach is that it has moved the focus away from the more traditional decision-making theory and accident prevention and more over to interpretation and inquiry that are grounded in capabilities for action (Eede, 2009). The main point of the Michigan contribution is, therefore, that HROs are reliable, because they are able to have a state of mindfulness (ibid).

3.4.1.3 HRO and NAT ‘head to head’

In a 1982 book edited by Sills, Wolf, and Shelanski, Todd LaPorte posted his contribution on High Reliability Organisation theory in relation to the accident at Three Mile Island, which was a partial melt down of a nuclear power plant in Dauphin County, Pennsylvania, in 1979. LaPorte discusses the inherent and potential dangers in large and complex organisations dealing with hazardous technologies. He argues for an integration of social sciences in the development and design of what he labels “almost error-free” organisational systems (LaPorte, 1982). In the very same book, Charles Perrow introduced his Normal Accidents Theory, stating that accidents in

large and complex technological systems are inevitable. Although complex organisations may work hard to avoid serious accidents and maintain safety and reliability, accidents are a 'normal' result and inevitable over time (Sagan, 1993). While the HRO theorists maintain that organisations are quite rational actors, the NAT theorists question what happens when performance is somewhat relaxed. James March, also a NAT theorist, asserts that when one relaxes the assumptions on organisational behaviour, a much more complicated and conflictual vision emerges: "[Organisations] exhibit internal conflict over preferences. Once such conflict is noted, it is natural to shift from a metaphor of problem solving to a more political vision" (March (1981) in Sagan, 1993, p. 28). This approach stands in contrast to the much more rational view of the organisations that HRO theory describes. Perrow argues that models of the organisations' behaviour are described as much more rational and effective than they are in the real world. He thinks that organisations are greatly influenced by sheer chance, accident and luck (Sagan, 1993, p. 31).

Perrow identifies two structural features of many organisations that operate in high hazard environments: 'interactive complexity' and 'tight coupling'. Because of this, organisations are prone to accidents, regardless of their leaders' and operators' intentions to counteract them. According to Perrow, "complex interactions are those of unfamiliar sequences, or unplanned and unexpected sequences, and either not visible or not immediately comprehensible" (Perrow, 1999, p. 78). He argues that no matter how hard people work to anticipate and fix all potential problems, unlikely and bizarre problems will occur. It is often the bizarre and banal failure that causes the normal accident. Unanticipated incidents in organisations with high interactive complexity like these are inevitable, according to Perrow. Although interactive complexity is the cause of bizarre failures, it is the second structural condition that Perrow calls tight coupling that is necessary to escalate an incident into a full normal accident. Firstly, tightly coupled systems typically have time-dependent processes in which production needs to move fast. Secondly, there is little possibility to vary production methods. Thirdly, they have little room for slack, which means that production must be precise, and fourth and lastly, safety devices, buffers, et cetera, are limited to the ones already designed into the system (Perrow, 1999). Sagan sums up Perrow's argument by saying that "If a system has many complex

interactions, unanticipated and common-mode failures are inevitable; and if the system is also tightly coupled, it will be very difficult to prevent such failures from escalating into a major accident" (Sagan, 1993, p. 36).

3.4.1.4 The Two Approaches Revisited

The two theories are quite contrasting and clearly competitive as well. "His [Perrow's] pessimistic conclusion – that "serious accidents are inevitable, no matter how hard we try to avoid them" – sharply contrasts against the optimism displayed by the HRO theorists" (Sagan, 1993, p. 31). HRO, on the one side, holds a positive view of high hazard organisations and their ability to approach near error-free and near-perfect reliability and safety, while NAT, on the other side, leads to a much more pessimistic view, in which serious accidents are inevitable. However, the HRO theorists do not dispute the logic of Perrow's argument that in theory, interactive complexity and tight coupling lead to accident-prone organisations; rather, they assert that the degree to which human agency can counter and compensate the structural pressure is much higher and has the possibility to avoid normal accidents in a much larger extent than Perrow holds. In direct contrast to Perrow, HRO theorists argue that "The[se] organisations have developed strategies for avoiding the negative effects of these characteristics" (Roberts, 1990). For the HRO theorists, if these conditions are met, a highly optimistic prediction of near-perfect safety is warranted: "Parts of these systems do fail," Roberts conclude in a critique of Perrow's book, but "it is really not clear that all high-risk technologies will fail" (Roberts (1989) in Sagan, 1993, p. 47). Sagan concludes by saying that: "Perrow may look at a glass of safety and find it 1 percent empty; HRO theorists may see the same glass of safety as 99 percent full" (Sagan, 1993, p. 48).

3.4.1.5 What is a High Reliability Organisation (HRO)?

All organisations can be seen as social phenomena that produce or provide something. Thus, high-hazard organisations resemble other organisations. The Berkeley Group began to apply the term High Reliability Organisation to differentiate between organisations, because they felt that some label was needed to identify those organisations that were clearly distinguishable from others. These organisations had not just avoided failure because of luck, but they "actively managed to control and reduce the risks of technical operations

whose inherent hazards make them prone to join the list of classical failures. In other words, these organisations have not just failed to fail; they have actively managed to avoid failures in an environment rich with the potential for error" (Rochlin, 1993, p. 15). The Berkeley Group oriented their empirical research around three main organisations, as mentioned above: the FAA's Air Traffic Control System, Pacific Gas and Electric Company's nuclear power plant at Diablo Canyon, and the U.S. Navy's nuclear powered aircraft carriers. "These complex organisations could offer ample opportunities for mishaps, loss of life, or at the extreme, widespread carnage. They operate safely, however, a fact not predicted by existing organisational theory" (Roberts, 1993a, p. 3). The Berkeley Group does not claim to have found a 'recipe' for designing failure-free organisations through their research, but "it does at least address some criteria which, if not present in an organisation's form or design, make it unlikely that it will in fact perform at a high level over long periods of time" (Rochlin, 1993, p. 13). There are several ways to define an HRO, and the Berkeley Group provide several characteristics, indicators, and criteria they have found in 'their' organisations. For the purpose here I think it is sufficient to use the commonly used definition by Rochlin which state that: "A highly reliable organisation is often defined as one that has already been judged on empirical or observational grounds to provide a desirable activity, product, or service at a desired or demanded level of performance while maintaining a very low rate of error or accident" (Rochlin, 1993, p. 16). Rochlin also writes that what distinguishes an HRO is not "their absolute error or accident rate, but their effective management of innately risky technologies through organisational control of both hazard and probability, thereby making possible the social exploitation of an activity or service whose social and/or human cost would otherwise be unacceptable at effective levels of performance" (Rochlin, 1993, p. 17).

3.4.2 HRO and Mindfulness

Some criticism has also been directed at the dichotomy between HROs and non-HROs, which has led to a call for a more integrated approach to the study of organisations (Scott (1994) in Weick, et al., 1999). In a response to this call, Weick, Sutcliffe, and Obstfeld (1999) argue that the value of the HRO approach is that they provide a "window on a distinctive set of processes that foster effectiveness under trying conditions" (Weick, et al., 1999, p. 82). This

means that, as opposed to other organisations, there is little or no room in HROs for trying and failing in the search for error-free procedures. “Diverse as HROs may seem, we lump them together because they all operate in an unforgiving social and political environment, an environment rich with the potential for error, where the scale of consequences precludes learning through experimentation, and where to avoid failures in the face of shifting sources of vulnerability, complex processes are used to manage complex technology” (Weick, et al., 1999). Nuclear power plants and air traffic control systems are examples of such organisations where the consequences of errors can be catastrophic and would imply great costs, both human and economically, to varying extents. The authors assert that “HROs warrant closer attention because they embody processes of mindfulness that suppress tendencies toward inertia” (Weick, et al., 1999, p. 82). They argue that the previous discussions around organisational accidents have been framed, to a large extent, in macro-level and technology-driven perspectives (Perrow and NAT) and that the discussion is enriched by adding the cognitive infrastructure that enables organisations to perform adaptive learning and reliability. “The enrichment arises from the facts that by explicating a set of cognitive processes that continuously reaccomplish reliability, we supply a mechanism by which reliable structures are enacted. This mechanism is often underdeveloped in non-HROs where people tend to focus on success rather than failure and efficiency rather than reliability” (Weick, et al., 1999, p. 82).

3.4.2.1 Mindfulness in Psychology

Weick and Sutcliffe build their understanding of the concept of mindfulness mainly on the work of the psychologist Langer, who describes mindfulness as a process of drawing ‘novel distinctions’. By doing this we (humans) keep ourselves situated in the present. Langer’s main point is that by relying on already drawn distinctions and categories, we become more unaware of the context around us and also of our own actions (Langer & Moldoveanu, 2000). This can then lead to what she labels ‘mindless behaviour’, in which rules and routines are more likely to govern our actions regardless of the circumstances. As Langer explains, “Mindlessness can show up as the direct cause of human error in complex situations, of prejudice and stereotyping, and of the sensation of alternating between anxiety and boredom

that characterises many lives" (Langer & Moldoveanu, 2000, p. 6). Tasks that are mechanically carried out by people working as telephone operators, checkout clerks, and airline personnel, for example, may often lead to personnel sleepwalking through the work day. Langer bases her claims of the effect of increased mindfulness on studies done among workers and managers in the business world (Langer et al., (1988) in Langer & Moldoveanu, 2000), education (ibid), and elderly populations through issues of aging and control (Langer, Hatem, Joss, & Howell, 1989). These studies showed that mindful treatments had great effect, especially considering creativity, learning, and attention (Langer & Moldoveanu, 2000).

3.4.2.2 Mindfulness in Organisations

Reliability was defined earlier as "the system outcome that can be described as safe, effective and efficient, in terms of average and variance" (Eede, 2009, p. 5). Weick defines reliability as the "unusual capacity to produce collective outcomes of a certain minimum quality repeatedly" (Weick, et al., 1999, p. 86), and that it simultaneously depends on the "lack of unwanted, unanticipated, and unexplainable variance in performance" (Hollnagel (1993) in Weick, et al., 1999, p. 86). However, Weick argues that it has been believed that highly standardised routines are what make a system reliable. However, the problem, according to Weick, is that "unvarying procedures can't handle what they didn't anticipate" (Weick, et al., 1999, p. 86). Systems must be able to handle unforeseen issues to remain reliable. What seems to happen in HROs, according to Weick, is that "there is variation in activity, but there is stability in the cognitive processes that make sense of this activity" (Weick, et al., 1999, p. 87). According to Weick et al., Schulman's study of Diablo Canyon (1993) exemplifies this, wherein he observes that it is not the organisational variance that makes the company reliable; rather, it is the ability to continuously manage fluctuations that seems to enhance reliability. "Instead, reliable outcomes now become the result of stable processes of cognition directed at varying processes of production that uncover and correct unintended consequences" (Weick, et al., 1999, p. 87). On the opposite side, it is the varying cognitive processes that produce unreliability, when the cognitive processes "no longer stay focused on failures, simplifications, recoveries, situations, and structuring..." (Weick, et al., 1999, p. 88).

"To grasp the distinctiveness of HROs, one needs to look more closely at the ways in which diverse but stable cognitive processes interrelate in the service of the discovery and correction of errors" (Weick, et al., 1999, p. 88). Weick et al. acknowledge that there has been ample recognition of how cognitive processes are associated with highly reliable organisational performance. This is exemplified through the work of Westrum (1993, 1997), Klimoski and Mohammed (1994), Thordsen and Klein (1989), and Hutchins (1990). What has not been recognised, however, is the clear specification of ways "in which these diverse processes interrelate to produce effective error detection" (Weick, et al., 1999, p. 88). Weick et al. outline five concerns that are "tied together by their joint capability to induce a rich awareness of discriminatory detail and a capacity for action" (Weick, et al., 1999, p. 88). This capability is what Weick and his colleagues have labelled 'collective mindfulness'. Weick, Sutcliffe and Obstfeld build upon Langer's work on mindfulness at the individual level in order to use it at the organisational level. They apply the categories that need to be present in order to be mindful at individual level and develop them into the five cognitive processes needed for collective mindfulness. Weick et al. point out that the state of collective mindfulness in HROs is not only an issue of "the way in which scarce attention is displayed" (March (1994) in Weick, et al., 1999, p. 90) nor about how much attention it is possible to store up; it is also about the quality of this attention and how people use this attention, what they choose to do with what they notice. Derived from this, if the possibility to act upon what people notice is limited, it is not long before their 'useless' observations of those hazards are also ignored or denied and errors cumulate unnoticed" (Weick, et al., 1999, p. 90). Following this, the possibility of achieving a state of mindfulness will depend on the possibilities people have for action. Limited action and few possibilities for activating cognitive processes result in a state of mindlessness or situations where people act on 'autopilot' (Weick, et al., 1999). "Mindfulness is less about decision making, a traditional focus of organisational theory and accident prevention, and more about inquiry and interpretation grounded in capabilities for action" (Weick, et al., 1999, p. 91).

3.4.3 The Five Processes of Mindfulness in HROs

For Weick and Sutcliffe it is the concept of mindfulness that can separate 'good' from 'bad' HROs. As already described, mindfulness entails several concerns that together form the possibility of being highly reliable.

Through investigations done in effective HROs, Weick et al. have distinguished five processes by which a state of mindfulness seems to be created:

1. Preoccupation with failure
2. Reluctance to simplify
3. Sensitivity to operations
4. Commitment to resilience
5. Underspecification of structures

A preoccupation with failure (1) implies that in an organisation where the possibility of trial and errors is limited, there is a will to learn by the errors that are available. This will encourage routines where people report errors because of the learning potential they provide. "Effective HROs both encourage the reporting of errors and make the most of any failure that is reported" (Weick, et al., 1999, p. 92). An example loaned from Westrum (1992 in Weick, et al., 1999, p. 93) describes how the German-American rocket scientist Werner Von Braun responded to a report from an engineer that he might have caused a short-circuit during pre-launch testing by sending him a bottle of champagne. Another example, loaned from Landau and Chisholm (1995 in Weick, et al., 1999, p. 93), describes how a seaman on a nuclear carrier reported that he has lost a tool on the deck. This results in that all aircrafts are redirected to land bases instead, and the seaman is later rewarded for his reporting at a formal deck ceremony. Similarly, Edmondson found that it was the highest performing nurses who had the highest error-detecting rates for adverse drug events. This finding was contrary to her hypothesis. "The general point is that, one means to learn, even where the possibilities of trial and error is [sic] limited, is by broadening the set of errors that are available from which to learn and by instituting practices that encourage people to report all of those errors that are detected" ((1996) in Weick, et al., 1999, p. 93).

The reluctance to simplify interpretations (2) is a way to avoid complacency and situations where people are socialised into ignoring the same things. “Simplifications […] allow anomalies to accumulate, intuitions to be disregarded, and undesired consequences to grow more serious” (Weick, et al., 1999, p. 94). “Traditional organisations tend to overlook the question of what they ignore [...] whereas effective HROs respect this question and know more about what they don’t know” (Weick, et al., 1999, p. 95). In addition, redundancy is often implemented in HROs to preserve awareness. Redundancy also takes the form of scepticism. “The scepticism may counteract the potential complacency that redundant systems may foster. Redundancy involves cross checks, doubts that precautions are sufficient, and wariness about claimed levels of competence” (Weick, et al., 1999, p. 96). “Concomitant with trust is the belief that all humans are fallible, and that sceptics improve reliability” (ibid).

Sensitivity to operations (3) lies close to the concept of ‘situational awareness’ that prevents errors from accumulating. Weick et al. lean on the work of Roth (1997 in Weick, et al., 1999, p. 98), who has studied simulated nuclear power plant emergencies and examined operator decision making. These simulations illustrated how effective HROs retained sensitivity. “Sensitivity to operations is achieved through a combination of shared mental representations, collective story building, multiple bubbles of varying size, situation assessing with continual updates, and knowledge of physical interconnections and parameters of plant systems [...]” (ibid). “The value of her work lies in the articulation of the ways in which higher-level cognitive activities, social construction of coherent explanations, and knowledge of the physical plant, all produce mindfulness in the moment” (ibid).

A commitment to resilience (4) makes an organisation not only able to ‘bounce back from errors’ (Weick, et al., 1999, p. 100) but also able to cope with unexpected events when they happen. They prepare for unavoidable surprises. “HROs acknowledge the reality of fallible humans, murky technology (Vaughan, 1996), and narrow specialties. To cope with this reality, they pay attention both to error-prevention and to error-containment” (Weick, et al., 1999, p. 100). Effective HROs usually develop what Wildavsky defines as anticipation and resilience. “Anticipation refers to the “prediction and prevention of potential dangers before damage is done”, whereas resilience refers to the “capacity to cope with unanticipated dangers after they have

become manifest, learning to bounce back"" (Wildavsky 1991 in Weick, et al., 1999, p. 100).

Lastly, the underspecification of structures (5) points to the case where orderly systems sometimes amplify errors. Therein lies a paradox, because the orderly systems that are made to avoid errors sometimes seem to cause them (Weick, et al., 1999). A way to avoid this may be through loosening the hierarchical decision structure and letting the decisions follow the problem. "To loosen the filter of hierarchy […] makes people […] pay more attention to inputs in the moment, they are more sensitive to their time of arrival, and processes are more influenced by temporal connections" (Weick, et al., 1999, p. 104). "What is distinctive about effective HROs is that they loosen the designation of who is the "important" decision maker in order to allow decision making to migrate along with problems" (Weick, et al., 1999, p. 103).

3.4.4 Summing Up

According to Weick et al., the main aim of the High Reliability Organisation approach is to repudiate the notion, of Perrow and Sagan especially, that normal accidents are bound to happen. Normal accidents are countered by organisational mindfulness: "When we propose these five ways in which mindfulness counters normal accidents, we differ from other analysts such as Perrow and Sagan because we do not treat technology as a given that dominates organisational life through its own imperatives. Instead we treat technology as an equivoque, as a sequence of events that can be understood more fully as a sequence of events that can also be interrupted, redirected, isolated, loosened, slowed, patched, halted, accelerated, etc" (Weick, et al., 1999, p. 105). In other words, in Weick et al.'s work, mindfulness is considered a counteracting measure against normal accidents: "Mindfulness both increases the comprehension of complexity and loosens tight coupling" (ibid). By depicting conditions that are to be sought instead of depicting what to avoid, the High Reliability Organisation theory provides insights into organisational principles that lead to reliable outcomes and they conclude that: "Reliability-enhancing organisations identify sets of outcomes they continually work never to experience" (Weick, et al., 1999, p. 108).

3.4.5 Main critique of the HRO Theory

Several lines of criticism and limitations have arisen toward HRO theory, both in itself and as an opposing theory to NAT. The next section follows an outline of two of the main lines of critique of HRO theory.

3.4.5.1 The HRO organisations used as affirmation of the theory

The original organisations used by the HRO theorists are a small number of hazardous organisations that have shown good safety records over time. According to Leveson et al. (2009), choosing one variable (as they have done when choosing those with good safety records) does not guarantee that this is transferable to other organisations and that similar results can be expected. For example, one finds in the HRO literature, as described by LaPorte and Consolini (1991), that these organisations operate in contexts of "nearly full knowledge of the technical aspects of operations in the face of recognized great hazard" (LaPorte & Consolini, 1991, p. 29). This statement seems to designate the HROs in question in a category of organisations that face little uncertainty. This may, then, imply that in order to apply HRO principles to an organisation, there is a need for a nearly complete knowledge of the technical aspects of operations. This has been properly criticised by Leveson et al. (2009), who asserts that this will exclude many organisations where total certainty is impossible: "Most systems must operate under uncertainty (technical, organizational, economic, and market), and the level of uncertainty is an important dimension of risk" (Leveson, et al., 2009, p. 7). Although they risk conceiving LaPorte and Consolini too literally, they underscore the essential point of many organisations' reality of coping with uncertainty. Their main point, however, is that much of the HRO theory is based on stable and predictable systems with low levels of uncertainties. This is not necessarily comparable to most other systems in which technological innovation and advances are necessary to achieve goals and missions. This is similar to the point made by Lekka (2011), who questions the possibilities of meaningfully transferring HRO processes to organisations that do not have safety as their primary goal. She claims that organisations facing constant market pressures may find it more difficult to implement such processes, such as the non-profit organisations described in the HRO literature have experienced (Lekka, 2011 see also; Leveson, et al., 2009). This follows the main criticism that HROs operate in 'exotic' contexts and, therefore, cannot

provide useful information to 'normal' organisations (Waller & Roberts, 2003). Waller and Roberts counterclaim this and underline that they do not mean that it is a simple process of just lifting the ideas and procedures directly from the studied HROs and applying them to other contexts. On the contrary the focus should, instead, be on the difficult job of "distilling the essence of core reliability processes from HROs and creating new knowledge – both theoretical and empirical – regarding these processes and their suitability for other organizations" (Waller & Roberts, 2003, p. 814). They point to recent research in which lessons from the HRO theory have been applied and say that what these articles show is how HRO knowledge gives a better understanding of core reliability processes. "Our main point is this: organizational environments have changed dramatically, rapidly, and unalterably, and those organizations once regarded as exotic are now becoming exemplars. HROs may now hold critical answers for 'normal' organizational adaptability, growth, and survival" (Waller & Roberts, 2003, p. 814).

3.4.5.2 HRO theory's lack of theoretical framework

Closely connected to the critique above is the critique that HRO theory is missing a theoretical framework that would make it applicable for use in other organisations. Critics ask for a theoretical framework that would explain why some organisations are able to operate and sustain a level of high performance while others fail (Boin and Schulman (2008) in Lekka, 2011). Instead, HRO research tends to be descriptive without evidence of the cause-effect relationship between safety performance and HRO processes (ibid).

Pettersen argues that there are few epistemological and ontological commitments in the HRO concept, and this makes the conceptual baggage of HRO primarily heuristic (Pettersen, 2008a). He asserts that "advancing this form of dualist theory must involve making clearer the ontological and methodological assumptions on which the theory is shaped and moulded" (Pettersen, 2008b, p. 26).

The critique against HRO on a general level is complicated, since the contributions from The Berkeley Group and The Michigan School work at different levels. In simplified form, we can say that contributions from The Berkeley Group favours structural dimensions of the HROs, while The Michigan School focuses more on the concept of culture and contextual

factors (Eede, 2009). After the publishing of the mindfulness/resilience approach, The Michigan School became the leading direction of HRO research. This approach had high face-validity and was also picked up by practitioners, especially after the publication of "Managing the Unexpected" (Weick & Sutcliffe, 2001), which revitalised the HRO theory and also provided a structural framework. This led to The Michigan School 'taking over' as prime providers of HRO influence. Eede concludes that "It is our belief that the Berkeley group, as founding fathers of the HRO, got bypassed by that other group of HRO scholars at the Michigan State University because the ingredients offered by the former were not novel enough, whereas with their concept of mindfulness and resilience, the latter offered a much more appealing body of theory" (Eede, 2009, p. 45).

3.4.6 Summarising HRO and Mindfulness

Above, I have contrasted HRO theory with Normal Accidents Theory in order to highlight the main points of this theoretical approach. Although these two theories contribute differently, history and literature have shown that, although examples of organisational unreliability have been demonstrated in the past, so has organisational reliability. Furthermore, these organisations have demonstrated reliability over long periods of time (Eede, 2009). According to HRO theorists, and especially Weick and colleagues, the deciding factor in explaining this performance is the processes of mindfulness. In brief, collective mindfulness provides a possibility to create an environment in which the human capabilities are given space and opportunity to operate reliably. Weick et al.'s argument emphasises that this accommodation is what enables organisation to become highly reliable. The HRO theory of mindful operations provides facilitating and inhibiting conditions in order to operate mindfully and, hence, reliably.

3.4.6.1 Airport security: a High Reliability Organisation?

Since the first studies of high reliability organisations in the 1980s, literature on high reliability has continued to grow and has also been applied in increasingly more contexts. It has even turned into a label of excellence that some organisations want to employ, especially organisations concerned with safety and public image (Bourrier, 2011). This is not so for airport security.

None of the agents included in this study have applied the term *high reliability organisation* to their work. The question thus still stands: Are airport security HROs? According to Frederickson and LaPorte (2002), airport security is an HRO: "Commercial air passenger security is part of a unique class of institutional characteristics and decision-theoretic challenges that are collectively described as *high-reliability organizations* (HROs)" (Frederickson & LaPorte, 2002, p. 34). What is characteristic of HROs is that they are error-intolerant. In the airport security context, error is defined as "a dangerous person getting on or dangerous object being put on an airliner" (Frederickson & LaPorte, 2002, p. 35). The airport is an entity that consists of many organisations in which the main aim en bloc is to run and operate air travel that is safe and (usually) economically sustainable. Security, in this connection, is one of the tasks performed in relation to the main aim. Although the security companies in charge of screening procedures are the companies contracted for performing security work, all working groups and companies at the airport touch upon security work and/or procedures. Security can therefore be understood as an interface between the different companies. This interface is underlain with strict rules, procedures and regulations for how people (passengers and employees) are to manoeuvre within it and is what I understand as the high reliability organisation of airport security.

3.5 Summarising comments

In this chapter I have problematised the main concepts applied in this thesis: security, risk and security risks. I then focused on two main parts of the literature: regulation literature and High Reliability Organisation theory. As will be further explicated in the empirical chapters, prescription and prescriptive regulation has been closely knitted with aviation safety from the beginning, and because aviation security regulation has largely copied regulatory practices from aviation safety, this has also become the case for aviation security.

The regulation literature presented here aims to provide a background for understanding not only the regulatory change that took place in aviation security post 9/11 but also the implications of applying a highly prescriptive regulation. I used the figure 'Space for Action' to illustrate the connection between regulatory types and possibilities for action for the regulatee. *Action* is a key word in relation to HRO theory and action, or rather the possibilities

for action, has therefore become the connection point between regulation and organisation. This will be further elaborated on and discussed in Chapter 7.

Prior to the empirical chapters, I account for methodology and the methodological approaches I have applied in this study. The methodology chapter aims to provide the reader with a guide for how I have approached the field to make it methodologically manageable to investigate and be able to answer the main research problem.

4 METHODOLOGY

In Chapter 1, I formulated the main research problem and the subsequent empirical questions that would collectively create a foundation for discussing the research problem. I introduced my approach to the research, which I called an 'integrated approach' to describe my use of several methods on several levels of the aviation system together with literature and theory from different disciplines in order to create a comprehensive account of the regulatory transition and the consequences this has had. As a social anthropologist, I have been trained in ethnographic fieldwork. However, within a short time after the outset of the project, I realised that, although my experience doing ethnographic fieldwork would be central to accomplishing this project, the field was so large and complex that a case study that *included* fieldwork would seem more appropriate in this large, and not so readily delineated, setting[20]. The focus of the study was extensive (the Norwegian civil aviation system) and it was necessary to decide on which parts of the system I should include, and in this, choosing appropriate methods for gathering data in this parts.

This chapter aims to describe the process of delineating a case that would aid me in gathering the data necessary to address the research problem and the methods I applied to carry this out. It is an exploration of how I delineated the case, the choices I made regarding the research strategy, and how I planned and realised the research. In the final part of the chapter, I include a short examination of ethical considerations, reliability and validity, and methodological strengths, weaknesses and bias.

4.1 Choosing a qualitative approach and what this implies

In this first part, I look more closely at my choice to conduct a qualitative case study. I then continue with a discussion of interpretation, preconceptions and biases in qualitative research. The purpose is to demonstrate my own view of the relationship between the researcher and his data and how openness around chosen methods, preconceptions and biases, in my view,

[20] By fieldwork, I mainly refer to doing participant observation and interviewing, which are further discussed below.

strengthens the credibility of the study. I also provide a short description of my own preconceptions before entering the field.

4.1.1 Choosing a case approach

The main aim of this project has been to look at security regulations in practice, which entails looking at this phenomenon in its real-life context. The field is complex, one might even say ever-expanding, depending on the chosen level of abstraction. In doing research in such a complex and multi-facetted setting, the case study approach is often applied because, according to Yin, it "allows investigators to retain the holistic and meaningful characteristics of real-life events – such as individual life cycles, organizational and managerial processes, neighbourhood change, international relations, and the maturation of industries" (Yin, 2003, p. 2). But this does not guide us in how one can do research in a complex field. Creswell defines a case study as "[…] an exploration of a "bounded system" or a case (or multiple cases) over time through detailed, in-depth data collection involving multiple sources of information rich in context" (Creswell, 1998, p. 61). The concept "bounded system" implies that it is bounded in time and place, and multiple sources of information implies observations, interviews, documents and reports. This seems to follow Yin's description of the case study as an empirical investigation of a phenomenon in its natural surroundings applying multiple sources of data. Ringdal discusses this description of case studies and concludes that "This is practically identical with common definitions of field investigations" (Ringdal, 2001, p. 114 [my translation]). When following a qualitative research approach, a case study is but one out of several possible research strategies. Other approaches could be phenomenology or a more 'pure' ethnography. In a phenomenological approach, the researcher intends to grasp the essence of experiences about a phenomenon. However, the data collection is typically quite constrained, since the form of data is usually gathered through long and profound interviews with relatively few participants (usually up to 10 participants) (Creswell, 1998). In a more pure ethnographic approach, the researcher is focusing upon describing and interpreting a social group or culture through a lengthy time in the field using primarily observations and interviews to collect data (ibid). Although the descriptions provided here of phenomenology and ethnography are highly simplified, they provide a background for contrasting a case-study approach

that comprises multiple methods, *including* ethnographic fieldwork, as one type of data collection method.

In this large and complex field I was entering into, I therefore chose a case study approach. I delineate it as a case study in that I used several types of data and data gathering methods in order to create an understanding of a situation that involved several particular fields and levels within the Norwegian civil aviation system. I will reflect more on my methodological choices in the conclusion of this chapter.

4.1.2 Interpretation, preconception and bias in qualitative research

With my background in social anthropology, it felt natural for me to choose a qualitative research design. However, the main reason for choosing a design needs to be the nature of the research question. As Robson explains: "The general principle is that the research strategy or strategies, and the methods or techniques employed, must be appropriate for the questions you want to answer" (Robson, 2002, p. 80). If one is searching to understand something and this something includes humans and human interaction, it would be natural to choose an interpretive, qualitative approach. According to Johnson, "Practitioners of almost all interpretive paradigms are searching in one way or another for some understanding (verstehen) rather than for some explanation of social phenomena" (Johnson, 1998, p. 140). The inner connection between qualitative research, understanding and interpretation can be found in the work of Husserl and Heidegger, since qualitative research has roots in these philosophers' thinking. For Husserl it was important that the researcher needed to describe phenomena without the constraint of metaphysical and theoretical speculations but instead described the phenomena as they appear to us (Sawicki, 2011). Heidegger, as a student of Husserl, followed these thoughts by developing the concepts upon which qualitative research rests. Hergenhahn (1997) refers to Heidegger's work, stating that the concept of 'Dasein' has been fundamental to qualitative research. Dasein is used to explain that a person and the world he lives in are inseparable. And following from this, it is in the interpretation of man's reality that the research can take place. Understanding, however, always comes before interpretation (Ormiston and Schrift (1990) in Gudmundsdottir, 1996). "Interpretation is the articulation and disclosure of understanding, the process by which we identify 'something as something'" (Gudmundsdottir,

1996, p. 301). According to Heidegger, interpretation is founded on three prestructures: 'Vorhabe' (fore-having), 'Vorsicht' (foresight) and 'Vorgriff' (fore-conception) (Heidegger (1962) in Gudmundsdottir, 1996). By applying these concepts, Heidegger shows how the researcher can never approach his data as a blank canvas, as if the researcher did not bring anything with him to the field. 'Vorhabe' reflects something we *have* in advance, and, more specifically, knowledge of our informants' language as well as our own research experience that we bring with us to our research. 'Vorsicht' reflects the more value-laden, preferred point of view regarding our inquiry and can be described as our *own understanding* of the different traditions in qualitative inquiry. 'Vorgriff' refers to our *socialisation,* the ways in which we have been taught to look at our research fields. As researchers, we include these three processes in how we interpret our data. "The fore-structures create the boundaries, or horizons, where understanding and interpretation [...] take place" (Gudmundsdottir, 1996, p. 302). If we then merge the three fore-structures and call them researcher preconceptions or biases, how should we as researchers cope with this? First, we have to accept that we are part of the data we gather. As Dewalt and Dewalt write, "Postmodernist writers particularly emphasise that the observer and his or her circumstances and biases cannot be separated from the accounts that they write" (Dewalt, Dewalt, & Wayland, 1998, p. 287). This is due to the inherent properties of the qualitative research strategy where the researcher can be described as being the instrument. As Brodsky explains: "[...] analysis, interpretation, and meaning-making come from the researcher, using all of her or his personal and professional skills, training, knowledge, and experience as an instrument to produce a coherent authentic picture of the research as the researcher saw and experienced it" (Brodsky, 2008, p. 766). We have to accept that we bring these fore-structures and preconceptions with us into our research, but what we can do, according to Dewalt et al., is to "make these biases as explicit as possible so that others may use them in judging our work" (Dewalt, et al., 1998, p. 288).

Johnson takes this further and argues that *this* is the importance of research design. He asks, "In a complex world of competing arguments, who is to be believed or trusted? Are data themselves, independently of how they were conceived and collected, proper evidence for making a case?" (Johnson, 1998, p. 131). He answers his own questions by leaning on Agar, who asserts that "a

credible argument should be systematic and based on a process that informs us about how researchers came to know what they know" (Johnson, 1998, p. 131). This is what should be reflected in the research design. According to Johnson, design involves "[…] the methodological and analytical details that contribute to the credibility, validity, believability, or plausibility of any study" (Johnson, 1998, p. 133). I relate closely to this, and it has been a deliberate choice for me to let this guide me in the writing of this chapter and in the description of my design. I try to account not only for my choices but also how I came to make them so the reader can follow my journey (as far as possible) in how I collected my data. I am sure that some may think I may have included excessive details in my descriptions, but this was an intentional choice for me. I chose rather to be too explicit than too implicit. I concur with Johnson who asserts that "The value of empirical evidence can only be properly evaluated by understanding the details of how the research was conducted" (Johnson, 1998, p. 132).

4.1.3 My own preconceptions

The journey of fieldwork is always interesting, especially when one realises how far one has moved from the beginning till the end of the time in the field. Although I did not know much about civil aviation and the regulatory system for security in advance, I had some thoughts on how things were connected in this field. I realise now that many of these thoughts were largely based upon media portrayals of aviation security. For instance, I had a quite clear picture of the difficult situation the pilots were in due to the new security regulations through descriptions in newspapers and television. As I also discuss in Chapter 6, I later realised that the pilots were a strong group who had strong labour unions, which often tends to give some groups a stronger voice than others. My point here is not to diminish the pilots' claims but rather to emphasise that I came to realise that there were others (as security and handling companies) that I had heard very little about in advance who also experienced challenges with the security system. Another issue, also closely related to media representations, was the role aviation security had in the public space. At the time when I started my project, there was much media attention around the liquid ban (see Chapter 2), which caused much debate about the intrusiveness of airport security. When looking at media coverage around the time period prior to my field work, the general themes revolve

around the hassle and inconvenience that airport security placed upon the passengers. Avinor, as airport owners, were often asked to explain why all this inconvenience was forced upon the passengers, this way almost implicitly portraying them as responsible for the new implemented measures. Much of this coverage caused a culture of ridicule in the public space, where it was normal to joke about the security control, security measures and security guards. This, of course, coloured my thoughts of the field in advance of my fieldworks. As I was also an ordinary airline passenger in advance of my fieldwork and data collection, I, too, had an impression of the security control and measures as somewhat exaggerated and excessive. They did not always make sense to me, and I wondered how some of the things we as passengers went through would enhance the overall security. I perceived the system to be overly rigid, and I believed that the responsibility for this rigidity belonged to Avinor and the Civil Aviation Authority (CAA). It did not take long after the first few initial interviews and reading some of the main documents for civil aviation security that I realised that my knowledge in this area had been superficial.

When I have talked with people about my research during the almost six years I have worked with this project (not informants), it is remarkable how quickly people begin to tell me stories. As soon as I have told someone that I am studying aviation security, people tend to serve me stories on their own initiative about some experience they have had themselves or someone they know has had in the security control at some airport. Usually, the point is to explain some absurdity or outrageous conduct by some security guard or how they were able to get some prohibited item through the security control. I am also often asked to explain why security measures are so cumbersome. During the course of this study, I have received many of these stories and questions, since most of us have some sort of opinion about the security control. But I realise now how differently I listen to these stories now than I did prior to my fieldwork. Earlier, stories like these only confirmed some of my own prejudices toward the security system, but now, stories like these start other processes in me. I begin to think of regulations and problems of implementation. I think about responsibilities for how the system appears as a much more complex issue than only placing it on any single actor in the Norwegian system. And I usually find myself, in situations like these, nodding to the person telling the story, thinking that this perhaps used to be

me for a few years ago. This is the extraordinary 'educating' side of doing fieldwork. During the course of a fieldwork, you twist and turn your own preconceptions, learning and relearning things you have taken for granted or not even reflected upon, always demonstrating to you how complex and intertwined things really are. And it is your task as a researcher to take this newfound complexity and make it into something simple and comprehensible again. It is a marvellous endeavour that never lets you return to your starting point again.

In the next part of this chapter, I will describe the preliminary phases of the research project with the development of the pilot study.

4.2 Designing the case 'security regulation in Norwegian civil aviation'

In the initial meeting with the reference group[21] in March, 2008, one of my main aims was to discover the possibilities for data collection within the civil aviation system. I was also interested in getting input from the main actors within the aviation system on what *they* perceived to be good strategies for me to follow. On the basis of this meeting, I realised I had to understand how the system was built up, get to know 'the ropes' of Norwegian civil aviation. This led to the decision to start with interviewing the main actors in the civil aviation system before doing fieldwork at a selection of Norwegian airports. In combination with these interviews, I began 'studying up' on the field I had

[21] My PhD project has been part of a larger project called 'The Social Determination of Risk – Critical Infrastructure and Mass Transportation Protection in the Norwegian Civil Aviation Sector'. The project was funded by the Norwegian Research Council and had the 1st of January, 2008, as the official starting point. This was the same date as the start of my own PhD project. Before I obtained a place as a PhD candidate on the project, the leader group had established contacts within the Norwegian civil aviation system and formed a reference group. The group consisted of representatives from the coordinating organisations: the Peace Research Institute in Oslo (PRIO) and the University of Stavanger (UiS), and also representatives from the Norwegian aviation system: Avinor and the Civil Aviation Authority (CAA). This cooperation between the research organisations, the main Norwegian airport operator and the supervisory authority was crucial for the attainment of outcomes relevant both for academia and the industry itself. I was first introduced to the reference group in March, 2008, where I presented an overview of my preliminary project.

chosen so I was able to understand more of what the interviewees talked about in the interviews. I read official documents and reports concerning civil aviation, first and foremost for Norwegian civil aviation, but I also went through documentation on how Norway was connected to the EU and what obligations Norway had as an EFTA-country. This saved a lot of time in the interviews, since we then had a common understanding of the background of civil aviation security and its regulation.

In this part of the chapter, I describe the circumstances around the interview: how they were conducted and how the interviewees were selected. I also include a description of the circumstances around my interviews within the Icelandic civil aviation system. I continue with the development of the pilot study at Sola airport and the function this had in 'paving the way' for the two following fieldworks at OSL Airport Gardermoen and Fjellvik.

4.2.1 The interviews

Prior to the first reference group meeting in March, 2008 (see above), I established contact with another researcher, Trond Nikolaisen, who was also involved in the project through his master's project. We worked with many similar themes in our projects, and we decided to cooperate on interviews of the essential actors within the aviation sector. We made this decision mainly because some of our fields of interests coincided and coordinating our questions and conducting the interviews together meant we would not take up too much of the interviewees' time. The persons we were interested in interviewing were highly occupied people working at the highest levels in the aviation sector. This way, we felt that we would cause as little inconvenience as possible, so instead of organising separate interviews, we decided to evaluate whether this cooperation was productive after completing the first interviews. We both had a full security clearance, which meant that the interviewees could speak freely[22]. The aim of these interviews was mostly quite uncomplicated, as our interest was to learn about the aviation sector and the regulatory developments after 9/11. This may also be a direct cause of why this cooperative interviewing worked, since the main themes of the interviews were mostly kept on a general level. This might have been different if the themes of the interviews were more personal or controversial.

[22] For further discussion of access issues, see below

4.2.2 The interviewees

In a large system such as the civil aviation system, which includes many organisations and people with different authorities and roles, a large part of the job is to find out who you should interview to achieve the kind of information you are seeking. In our case, we started out with a few recommendations from a representative in the reference group and spun off from there. We started with two interviews when we attended the Norwegian Aviation Conference in February, 2008. This annual event gathers both governmental and private actors from within the Norwegian aviation sector. This way, attending the conference proved to be a productive way to be introduced to the areas of interest for the aviation sector itself. We also used some of the spare time outside of the conference program to conduct the first interviews. The first interviewee worked in the security department at Stavanger Airport, Sola. She had been recommended due to her thorough knowledge of security and the European Union, but as she had not been part of the transition phase after 9/11, 2001, she recommended that we contact a few others to ask about this particular part. In addition, we interviewed a representative from the Civil Aviation Authority who worked mainly with airport inspections. With these two interviews as a starting point, we were referred to other people within the system who again recommended others (or sometimes the same people we had already interviewed). Before our last interview in April 2008, we perceived to have generated a quite detailed picture of the regulatory development for civil aviation security post 9/11 on the authority level. This was further supported when we conducted the last interview with one of the representatives from Avinor. At the end of our interview, he suggested another person he thought we should interview. We could inform him that we had already talked with that person. Then he continued by recommending that we should definitely talk with someone from the Ministry of Transport and Communications, which we told him that we had already done and also with whom the interview was done. He then commented that we 'had a really good cast of characters' and that 'our research would at least not be hindered because of the people we had involved'. By recruiting interviewees through recommendations as well as including some more, as we did with representatives from the unions and the National Investigation Board, we felt that we were gaining a thorough picture of security in aviation after 9/11 in the Norwegian setting. The interviews

gave me an understanding of what had happened at the authority level in the aftermath of the large regulatory changes that took place after 9/11. This way, the interviews worked as a way for me to learn how the system worked, what roles the different actors had, and how they were connected to each other and outwards toward the rest of the world.

4.2.3 Preliminary phases of the fieldworks

After finishing the interviews, the preliminary work of planning the fieldwork started. I had decided that I wanted to do fieldwork at three different airports that varied in size and geographical location. The main reason for this choice was that through input from people in Avinor and the Civil Aviation Authority, I understood that there was a significant difference between the larger and the smaller airports from the perspective not only of their operations but also how they worked with the security regulations implementation. Additionally, operating an airport in the North of Norway with a hush climate and in remote locations was quite different than operating in the more central southern districts. Thus, I presented my plan for Avinor and together we decided on three airports I would get access to. I would start with the airport pertaining to the city I lived in and conduct a pilot study there. Doing a pilot study can have several benefits. It can assist the researcher in developing relevant guidelines for the study, clarify concepts and generally refine the data collection plans (Yin, 2003). In choosing the pilot study, several reasons may be decisive: geographic location, informants that are especially accessible or congenial, access or convenience (ibid). Since the pilot study became the location for the refining of my final research design, it also became the place where I dedicated the most data collection time. This was because the time had to be divided between the elaboration of a feasible fieldwork at the airport (described further below), the actual data collection in the field, and also time for testing (and failing) in creating the boundaries and delimiting the final case. At the end of the pilot study, I had elaborated a draft for the two other field locations I had selected. Additionally, during the time at Sola I had learned that Iceland, which was in a quite similar position as Norway toward the EU, had chosen an implementation strategy different from Norway's. I therefore decided to include a set of interviews from the Icelandic civil aviation system that could work as a comparison to the Norwegian

implementation. I will here describe how these interviews were arranged and carried out.

4.2.4 Collecting data in the Icelandic civil aviation system

So far I have discussed the circumstances connected to the development of the fieldworks and interviews in the Norwegian case setting. Here, I will describe the setting for the data gathered in Iceland. As already mentioned, it was while doing the fieldwork at Sola that I learned that Iceland had implemented the EU regulation only on the international aviation system and not on the national system, as Norway had done. It was during my fieldwork time at Sola, the first contact was made between the Sola Security Department and the Chief of Aviation Security at the Icelandic Civil Aviation Administration. In December 2009, more than a year after the initial contact was made, the dates for my interviews with different representatives from the civil aviation system in Iceland were set. The ambition for the interviews in Iceland was for me to learn how the Icelandic system had worked with and implemented security regulations post 9/11. I conducted one interview with two representatives from the Icelandic Civil Aviation Administration (where the Chief of Aviation Security was one of the representatives), one interview with the Airport Director and the Chief of Security of the international Icelandic airport, and an interview with the Airport Director and the Chief of Security at the national airport. The setting for the interviews was very similar to the interviews conducted at the Norwegian authority level and was, therefore, following a more semi-structured interview format. The interviews conducted in Iceland can be juxtaposed to the interviews conducted with the Norwegian Ministry of Transport and Communications, the Civil Aviation Authority, and Avinor Central Offices, since the themes for the interviews were approximately the same: to acquire insights and to understand the transitional phase post 9/11 regarding security regulation. An additional agenda for me in the Icelandic interviews was to understand why they had chosen a different implementation strategy than Norway. This is also why I have chosen to focus primarily on the interview with the Icelandic Civil Aviation Administration in this thesis. The other interviews, however, were important for my understanding of the practical realisation of Icelandic aviation.

So far I have described the initial phases of my research project and planning, including the Icelandic interviews. I will now describe more thoroughly what I have called the pilot study, which describes the background for my choices of focus at the airport fieldworks.

4.2.5 The actual Pilot Study

As Sola Airport was already involved in the project (through its representatives in the reference group), it was a natural place for me to start planning my project and the fieldwork or fieldworks that would follow. My main contact person there was the Chief of Security (CoS), and he worked as both an organiser (enabler) and a sparring partner in the developing phase. In addition, as he had worked for almost 30 years at the airport, he had extensive knowledge of both aviation in general and the security- and safety-fields with which he had worked the most over the last years.

The fieldwork at Sola was supposed to have several functions. This was where I 'learnt airports', so to speak: how they worked, who was responsible for what, and where the airport was connected to the other surrounding organisations, such as Avinor central offices and the Civil Aviation Authority (CAA). This formed the foundation for the next fieldworks I was going to do at OSL and Fjellvik. It was a huge learning process for me, which is also why the fieldwork was much more extensive at Sola than any of the other airports. At Sola I thoroughly discussed with airport management where it would be most beneficial for me to be, meaning which companies at the airport I should do fieldwork in, and then I got to test it out in practice. All employees at the airport had to conduct themselves in a few or several ways according to the security regulation so that no one was unaffected by security. If we consider the airport as split in half, with one part completely open to the public and the other side restricted and only open for those who have undergone a security check, it may be strange to think that the unrestricted side had to relate very much to security. Although it was clear that it was the personnel who worked at the restricted areas or who moved between them who had to relate the most to security, the companies on the unrestricted side had no exceptions. All people working at the airport had to go through safety and security training[23], and all of the products or merchandise moved into the building had to be

[23] Which entailed computer-based training programs

equally controlled. In short, everyone whose workplace was at the airport had to have a relationship to security. This was significant in the delineation of the field in deciding which criteria should be decisive. Should it be sufficient that the informants merely touched upon security in one way or another, or should there be something more? As the companies in the unrestricted area had few contact points with security compared to the others, I decided to leave them out and instead focus on the companies operating on the inside or 'in between'.

In this process of learning airport, I started with initial meetings and conversations with Avinor's Security Department at Sola. Through the spring and summer of 2008, following the reference group meeting in March, I spent much time in Avinor's office area. The Security Department, and its Chief of Security in particular, gave me insights into the operation of an airport in practice and the work and challenges regarding security issues and regulations. I was also allowed to participate in meetings both prior to and during my fieldwork, which provided me with insights into how they talked about and worked with security both as the airport operator and also across the company borders. As already mentioned, we also discussed in these meetings which companies at the airport would be the most relevant for my topic and which groups would be most related to the themes I wanted to explore. In addition, this sometimes entailed delineating groups within the same company where this was suitable. This will be further described in the following section.

4.3 The final delineation and methods applied

4.3.1 Selecting the airports and companies

I decided early in the planning of my project that I wanted to do fieldwork at more than one airport. This decision was made for mainly two reasons. First, I was informed early on by Avinor representatives (both in the reference group and the first interviews) that the small, regional airports had different challenges than the larger ones. Secondly, and based on the first, I assumed that implementing the same regulation, regardless of size, would have some consequences for the particular airport which perhaps could be attached to its size. I therefore had to make some choices regarding which airports should be

included and what criteria should be used for this selection. Avinor's airports were separated into three categories: small, medium and large. There were 26 small, 16 medium and 4 large. OSL was considered to be in an own division apart from the categorisation (see Figure 1 for an overview of this categorisation). In deciding which airports I was going to do fieldwork at, I decided to choose OSL since this was the only airport large enough and hence constructed for the handling of the security regulation. I chose Sola as a representative for the large airports and Fjellvik as a representative for the small, regional airports. This way, I left out the medium sized airports from the study. The reason why I ended up choosing them out was twofold; first, I had limited time and resources for doing the fieldworks and I was hesitant to leave out any of the other airports. However, secondly, and perhaps most importantly, the medium sized airports are a mix of both small and large airports. Some of the medium airports are quite similar to the small and some are more similar to the large airports. In the discussions I had with Avinor about selecting the airports for the fieldworks, we discussed the possibility of leaving the medium sized airports out of the study. Avinor did not express that having a representative from the medium size in itself was the most important. What did seem important to them, however, was to contrast a small and a large airport and to include OSL, if possible. I chose to follow Avinor's recommendation, included OSL and left out a medium sized airport.

During the pilot study at Sola, I decided to follow four companies at the airport: Avinor as the airport operator, two handling companies (SGS (SAS Ground Services) and Norport), and Securitas[24]. These companies were most involved with the security regulations at the airport. Since I would also find almost all of the companies at the three airports I had chosen, I assumed that if size and geographic location *did* matter in the implementation of security regulations, I would get an impression of this by following the same companies at three different airports. This proved to work well, with some exceptions I will describe later.

First I will describe the main data collection methods applied in the field.

[24] For a more profound description of these companies, see chapter 2, 'Background and Context'.

4.3.2 Collecting data

4.3.2.1 Interviewing

At the beginning of this chapter, I described how I applied interviews as a data collection method to gain knowledge about the Norwegian civil aviation system and the regulatory change processes after 9/11, 2001. The interviews on authority level (both in Norway and Iceland) were mainly semi-structured. Bernard writes that "Semi-structured interviewing works very well in projects where you are dealing with high-level bureaucrats and elite members of a community – people who are accustomed to efficient use of their time" (Bernard, 2006, p. 158). I applied this interview type on occasions when I knew I would have few, or maybe only one, possibility to do the interview. The interviews I conducted at the airports, however, were often more unstructured. By this I mean interviewing where I had a clear plan of the themes I wanted to talk about but where I let the conversation develop more informally.

At the airport, I used interviews as a way to gain knowledge about the management's point of view in the companies where I did fieldwork. I typically started with an interview prior to the fieldwork and concluded with an interview following the fieldwork. This way I was able to ask the leaders in the company directly about issues that appeared in the course of the fieldwork. The initial interview also worked as a way to structure the fieldwork I was about to do. Normally we discussed questions like where (within the organisation) I could conduct the fieldwork, who my contact person(s) would be, how I could introduce myself to the employees, and the time period for my stay.

I applied interviews this way in the situations where I was interested in gaining a general overview of certain issues, situations and settings. The semi-structured interviews taught me much about the larger processes regarding regulation, while the more unstructured interviews at the airports helped me gain an overview of organisational issues at the airports and helped me fine-tune the approach to the fieldworks. In addition, the end-interviews with the managers worked as a way for me to review the insights I had gained in the fieldwork, which made me ask different questions than the ones I perhaps had asked prior to the fieldwork, thus giving me different perspectives.

The interviews were, therefore, a way for me to get the more general overview. It was through the fieldworks, however, that I got more specific data that gave me insights into the challenges of operating with and according to security regulations in practice. Below, I explain more of what I mean when I use the term 'fieldwork', and I describe, through some examples, how I actually carried out the data collection in the 'fields'.

4.3.2.2 Fieldwork, participant observation and participating observer/observing participant

Fieldwork can be described as a strategic method to conduct research that puts you right in the middle of the action and lets you collect data (Bernard, 2006). Historically, the anthropological fieldwork involved going away to another culture, learning the language of the culture one visited, and staying there long enough so that people began acting normally when the researcher showed up. The main method applied in the field was that of participant observation. It was about "stalking culture in the wild" (Bernard, 2006), which it still is. Today, the fieldworker may do research in his own culture, in an institutional/organisational setting or in an urban context; in other words, in just about any setting he wishes – but the principles originating from the traditional fieldwork are still the same, including the applied methods. There are several advantages to applying participant observation as a data collecting method. The method of participant observation deviates from the role of being a mere participant and observer (which all humans are in their everyday activities), since "[...] the method of participant observation includes the specific use in behavioural analysis and recording of the information gained from participating and observing" (Dewalt, et al., 1998, p. 259 [emphasis original]). The method requires a specific approach to recording the observations in field notes, and this information that the researcher gains through participation is, according to Dewalt et al., "... as critical to social scientific analysis as more formal research techniques like interviewing, structured observation, and the use of questionnaires and formal elicitation techniques" (Dewalt, et al., 1998, p. 259). Applying the method of participant observation gives the researcher insights and understandings in the social world with subjective meaning and experiences of the people in the field-context. In addition, participant observation provides material in a more or less unique way since: "... the type and depth of insight and interpretive

material which [participant observation] yields are difficult or impossible to gather using other research methods" (Seymour-Smith, 1986, p. 216).

In fieldwork, there are two particular roles the researcher can have: participant observer and complete observer (Bernard, 2006). Ethnographic research is mostly based on the second role. This role can be delineated further, since one possibility is to be an insider in the ethnographic context that does observations and record some aspects of life around him; that is, an observing participant. Another possibility is to be a participating observer who participates in some aspects of life and tries to record whatever he can (Bernard, 2006). Which role the researcher has will be determined of the nature of the field in which he does research. Some fields are more prone to participation, while in other fields where there may be a large degree of specialisation among the informants (as in many work places) it may be more difficult since it can involve extensive training, among other things[25].

4.3.2.3 The issue of time

There are some important things one should bear in mind when conducting fieldwork. Time is a key word here. The anthropological fieldwork is considered to be time consuming, traditionally often taking a year or more. There are several reasons for this, because visiting other cultures that are, perhaps, very different from one's own, may demand a long time just to settle in, learning the new language and achieving a position where one is able to ask good questions and get good answers (Bernard, 2006). In addition, being present in the field context during the different seasons often provided different kinds of data. Doing research in one's own culture has advantages and disadvantages. The most obvious advantage is that one is doing the fieldwork in one's own language, and it saves much time not have to learn a new language. Secondly, if one is quite well known already in the field situation, it may take less time to become accustomed to the field setting. In addition, in doing research in a more modern context, the seasons will often be of less importance. The main point taken from the traditional fieldwork is that the researcher should stay long enough so that he not only scratches the surface of a phenomenon, but is able to grasp the social reality of the field as

[25] For examples of researchers that have undergone training to become observing participants see Bernard (2006) p. 348.

far as possible. Conducting participant observation reduces the possibility that people act differently when they know they are being studied; in other words, it reduces the possibility of reactivity (Bernard, 2006): "As you become less and less of a curiosity, people take less and less interest in your comings and goings. They go about their business and let you do bizarre things such as conduct interviews, administer questionnaires, and even walk around with a stop-watch, clipboard, and camera" (Bernard, 2006, p. 354). The main point to take from this is that it is necessary to stay long enough in the field so that people are accustomed to the researcher being there, and the stories one is told are not only sensational stories that may not be representative for what is 'really' going on.

So how long should one stay in the field then? Hannerz (2003) asserts that the traditional field site was closely linked to nature (as described above) and, thus, to the seasons of the year. In addition, the researcher had to reach acceptance among the local people to the degree that he or she could be part of just about all activities in that society. These things take time. Hannerz' argument is, thus, that other topics may not call for the same amount of time. For instance, in a multi-sited fieldwork, these issues may be of less importance, and it is possible to bring what one has learned to the next field and not necessarily begin from scratch (ibid). This entails that there may not be a need to spend the same amount of time when one has several field sites, since it is possible to draw on knowledge already obtained from previous field sites. Or as Bernard points out, "[...] you may have already picked up the nuances of etiquette from previous experience" (Bernard, 2006, p. 350).

4.3.2.4 Describing the fieldwork(s)

I previously described how I delineated the field, how I chose which companies to conduct the fieldwork within, and how I used interviews at the beginning and the end of each section of the fieldwork. In this part I want to describe the actual conduct of the fieldwork; the *how* of the fieldwork.

Meetings

Meetings were an essential part of all the fieldworks I conducted. This was especially due to two reasons. The first reason was that two of the airports where I did my fieldwork were large (although to a different extent), which meant that there were many employees and the companies were at different

locations within the airport buildings. This made it difficult for me to introduce myself in a 'door-to-door' approach, since this would have been very time consuming. Instead, I was able to attend a meeting at Sola called 'Security Forum' that consisted of leader representatives from all the companies at the airport. Similarly, I attended a meeting at OSL called 'Security Network Meeting' attended by representatives from the companies I was doing my fieldwork with. This way, the initial meetings became an important channel for presenting my project and me in a manner that (I hoped) made the companies also want to be a part of my project. It was also a practical way to be introduced to the persons I was more or less dependent on to carry out the fieldwork.

The second reason that meetings were essential is that they gave me valuable insights into the challenges and problems they met at leader level in relation to security regulations. The value of meetings is also underscored by Schwartzman who asserts that "[...] researchers have begun to realize that routines and forms like meetings and stories [...] provide researchers with important information about the social structure and culture of organizations and society" (Schwartzman, 1993, p. 38). Meetings, for me, became a channel to see which issues were emphasised (or not) and how they were emphasised by the leaders at the airports.

In all three airports, I was invited to meetings related to security issues. At Sola and Fjellvik, these meetings usually included all companies operating at the airports, while at OSL meetings seldom included every company and were held more locally within each company. This way, there were fewer meetings at OSL since I was invited to the meetings that were held by the airport operator, OSL, and not to the local meetings. Besides these meetings, I was invited to meetings held outside of the airport, such as the quarterly security meeting between the directors of the largest airports and also an inspection meeting at Fjellvik between Avinor's central office and the airport management. I was also invited to one meeting in relation to the joint Civil Aviation Authority (CAA) and EFTA Surveillance Authority (ESA) inspection at one of the airports, but this invitation was later withdrawn, since some participants preferred to have the meeting without the interference of an outsider. As a result, I was never able to participate in any interaction between the CAA and/or the ESA and the airport management, which could have given me insights into how they communicated with each other and what

issues were typically discussed. Since this was not possible, on two occasions I met with airport representatives both prior to and after such inspections.

Participant observation

As already outlined, in the interviews with the management of the companies, we also discussed the plan for my fieldwork. Since the companies I conducted fieldwork at were large companies with many tasks, we typically tried to elaborate which groups or part of the company I should participate in and also in what way. The following two examples, from the initial fieldwork with Securitas and one of the handling companies at Sola, show how this was carried out.

Securitas

At the initial interview, the Leaders presented the different work tasks they had within their company. These included passenger security control, employee security control, patrol (within the airport), the barracks, the control where all articles and goods were screened, and other small odd jobs, not readily defined[26]. We decided that I would begin with 2-3 weeks in the passenger security control, and then continue to other areas. We discussed how I could introduce myself to the employees, and since the security guards had no work e-mail and they never had staff-meetings with everybody present[27], I suggested putting a poster up on the wall in the staff break room. I hoped this would give at least a minimum awareness of my presence there for most of them, so that I did not just appear in the security control one day. One of the main reasons for my reluctance to do so was that I was afraid that I would be conceived as a controller. Controllers were either people from Securitas, Avinor or the Civil Aviation Authority who sometimes came to observe the security control. Controllers usually just appeared (one or two) and observed them working, perhaps taking notes. This could last for 10 minutes or much longer. I was given the impression that since the guards were

[26] For an elaboration of the work tasks, see chapter 2, 'Background and Context'

[27] This is so because it is difficult to gather every employee (since someone always is manning the posts), and it is difficult to have meetings outside of operating hours. Therefore, meetings were usually done only with leaders and middle-managers. It was their duty to then convey important information to the rest of the employees.

not given an explanation for these controls, and they rarely knew what exactly was controlled, this caused some unease. My intention was to avoid this role by introducing myself in advance through my poster. I later found out that about half of the people I spoke to had seen my poster, and the rest had no idea who I was when I began 'hanging out' in the security control. To some, my sudden appearance resulted in what I perceived to be the unease described earlier, and this had consequences for my role afterwards. Especially on one occasion, I was standing on the inside of the security control just watching the processes of getting the passengers through the control. I became aware of one of the Shift Leaders (whom I had not met before) watching me repeatedly. I tried to smile and nod to her (as we were at a distance from each other) without her reciprocating my small greetings. After a while she asked out loud in the direction of the Coordinators' office while nodding in my direction "Does anybody know what she's doing here?" It seemed like she thought that I was a controller of some kind and that my presence there made her uncomfortable. The Coordinator came out of the office and explained my being there, but I do not think that helped much, since she just went about her business again without speaking to me. During my time in the security control, I tried to talk to the same Shift Leader on a few occasions, but she was not very willing to speak to me. If this was caused by our poor introduction or not, is difficult to say, but I consider it reasonable to believe that this did not help. This is an example of what I was trying to avoid by being introduced in advance, but it is difficult to avoid one's role in the field being misunderstood in some way, which underlines that the role one has as a researcher is not only decided by yourself but will also be interpreted and ascribed by the people in the field. I will return to this issue under 'roles'.

I used two weeks first in the security control before I began to accompany the security guards to the other work tasks they had. I participated in all their different duties and decided I would concentrate on the passenger security control, the employee security control and the security barracks, since these had the most intersecting points to practices in accordance with the security regulations. At the time of my fieldwork, Securitas at Sola had about 150 employees (including both full- and part-time employees). During the first two weeks in the security control, I got to know some people better than others, and I began to follow their shifts (although not exclusively). I followed shifts that started early in the morning and also the last shift for the night. I

spent a month with Securitas, where I divided my time in the last weeks between the security control for passengers, the employee security control and the barracks.

Handling companies

I started the fieldwork at the first handling company the same way as I did with Securitas: with an initial interview of the management where we also planned my fieldwork. After the interview, I was immediately taken to the offices and break room at airside and introduced to the middle-management and also the team I was mainly going to follow. This way, there was little question about who I was when I began the fieldwork. The handling company mainly consisted of two work groups: the ramp agents and gate personnel[28]. I started by staying a few days with each group and found that the ramp agents were the employees who had the most contact points with the security regulation; therefore, I chose to direct most of my time with them. After the initial days when I accompanied the gate personnel, I spent two weeks in the first company with the ramp agents whose starting shifts began at 04.00 in the morning and participated in almost all of their activities. Some activities I could participate inn, like stowing luggage, but many activities I could not do, such as driving the numeral vehicles. After finishing the fieldwork at the first handling company, I continued to the second handling company at Sola where I spent about two weeks. I spent about five weeks altogether with the handling companies.

[28] See chapter 2, 'Background and Context', for an elaboration of the handling companies, and chapter 6 for an elaboration on factual work tasks the ramp-agents had

Table 2: Overview of data collection

Period	Location	Activity
05 - 06. Feb, 2008	Bodø	Norwegian Aviation Conference
Feb - April, 2008	Bodø, Oslo, Lillestrøm	Interviews: Civil Aviation Authority, Norwegian Accident Investigation Board, Ministry of Transport and Communications, Avinor, Norwegian Pilots' Association, Norwegian Association for Flight Crew, Airports Council International (11 interviews)
April - Sep, 2008	Stavanger	Document search, literature search, meeting activities at Sola Airport
Sep - Dec, 2008	Stavanger	Fieldwork Sola Airport
Dec, 2008	Stavanger	Processing data from Sola, Preparing for fieldwork at OSL Gardermoen
Jan - March, 2009	OSL Gardermoen, Oslo	Fieldwork OSL Airport
March - mid-April, 2009	Stavanger	Processing data from OSL, Preparing for fieldwork at Fjellvik Airport
Mid-April - May, 2009	Fjellvik	Fieldwork at Fjellvik Airport
2 weeks March, 2010	Reykjavik, Iceland	Interviews: Civil Aviation Administration, ISAVIA Reykjavik Airport, ISAVIA Keflavik Airport

Variations in the fieldworks

Above, I describe how I typically initiated and conducted the fieldworks. After doing it this way quite successfully at Sola, I hoped to apply the same approach at my next field site, which was OSL. Upon my arrival I had already

planned the first interviews and meetings through mail correspondence with the Chief of Security at OSL, so the fieldwork began effectively. As my approach to the fieldworks with the security company and the handling companies had worked well, I initiated them the same way at OSL. This generally worked well, with some exceptions and unforeseen events (described below). The last fieldwork at Fjellvik was somewhat different, since the airport had a total of 26 employees. To maintain the boundaries between the groups and companies, as I had done on the other fieldworks, would have been somewhat artificial. Therefore, I usually 'followed the action' instead, meaning that I moved around more fluidly between the groups and talked with people when they had time or were available, independent of their company. This worked well for my fieldwork there, as it enabled me to tag along when opportunities to follow an activity occurred.

Presentation style of empirical data

In a case study, such as this, where several methods are applied, the type of data that is gathered will also vary. The interview data gathered at what I have called the authority level, both in Norway and Iceland, were much more structured than the more experience-near data gathered from the airports. This difference is anchored in the type of questions the data were supposed to answer. The interviews at the authority level, as already described above, intended to create a more general overview of regulatory processes, while the fieldworks were intended to describe in much more detail processes that took place at the airport implementation level. I have also separated the two empirical chapters according to this delineation, and the reader may, therefore, see a change of pace in presentation style from the first to the second empirical chapter (5 and 6). To do it this way was a deliberate choice, since doing participant observation in the field situation involves the researcher to a different extent than it does in the more formal setting of an interview. The data presented from the airports are, therefore, presented in a more 'experience-near' fashion where my participation is more recognisable.

In regards to the use of quotes in the empirical Chapters 5 and 6, the interviews at authority level (both in Norway and Iceland), Avinor and the different Associations were tape recorded. These quotes are therefore only translated and edited by me. In the interviews and conversations at the airports, I took notes and wrote when I could since it often would be

impractical to apply a tape recorder. Thus, the quotes are not as directly recorded. However, most of the quotes I have applied in this thesis have been written down directly in the setting, or noted and elaborated within short time by me in order to be as true as possible to the statements from the informants.

4.3.3 The unpredictability of doing fieldwork and other considerations

In what follows, I will outline some of the more unforeseen parts of the fieldworks. In many ways one can see the fieldwork as having a life of its own, since one is often unable to control how things are played out in practice. While I perceived that my overall fieldwork went well, especially considering the number of companies and locations involved, there were things that did not go exactly as planned and also issues that are difficult to plan for. I will describe some of these events that ended up being influential for the final research and data collection.

4.3.3.1 The airports' background was important in the implementation phase.

During the fieldworks, I realised that the different airports I visited had different backgrounds. This became more evident by going deeper into the history of regulatory development in Norway. Using OSL as a starting point, this airport took over as Norway's main airport on the 8th of October, 1998[29]. One can say that from that day, OSL was Norway's main gate out of the country. There was a security screening system then, although it was not like today's. Nevertheless, OSL worked as a hub where the national flights fed passengers into the system of international flights, screening the passengers with the security system operating at that time. Thus, when the 9/11 attacks occurred, OSL was already designed to separate the clean and unclean passengers (meaning those that had been security screened or not). The airside, for instance, was fenced in and unavailable to the public and the passengers were security screened; although not 100%. Implementing the new regulatory system after 9/11 at OSL was not, therefore, as 'revolutionary' as it was for other Norwegian airports, like Sola, but perhaps most of all for

[29] For an elaboration on OSL, see chapter 6.

Fjellvik and the other small airports. Because of this it was almost to be expected that the challenges I found at the different airports often seemed to pertain to their sizes within the system. The regulation (EC) No. 2320/2002 was designed for large airports like Heathrow in London or Charles de Gaulle in Paris, and implementing it on OSL, which was already working as the Norwegian hub and main international gateway, was not a very large upheaval. At the other airports (more or less all the other Norwegian airports), the systems and buildings were not constructed to support the new regulatory regime. With limited funds and personnel, the airports accommodated what they could and tried to mend the systems and resources they already had to be able to meet the requirements. It is easy to understand why this process was a much heavier one for them and why the different airports had different challenges and bottle necks they had to overcome to implement the new regulation.

This had also consequences for the data collection process and I therefore realised that I had to rationalise and adapt. For instance, shortly after starting my fieldwork at OSL, I noticed that I was not finding the same issues there as I had done at Sola. I became a bit perplexed when I was not 'finding anything', meaning that the employees did not seem to experience the same issues that had been described at Sola. An example of this was that during my first week at OSL, which I spent with one of the handling companies, I participated in the same way as I had at Sola, but the ramp agents did not have as many opinions about security and the obligations caused by the security regulation. I realised that the only intersecting point the ramp agents at OSL had with security was the employee security control they had to go through when they started their shift, as all other employees working on the inside of the airport had to do. The reason for this was that at OSL, all airside areas were within the Critical part of Security Restricted Area (CSRA), which meant that there was no extra security control on the airside as there was at Sola and Fjellvik. I then understood that the airport layout was playing a large role, and in realising this, I decided to move on to use my time at other places at the airport.

4.3.3.2 Things that do not end up as planned: pilots and crew

As described previously, the group that has received the most media attention in Norway regarding the aviation security regime is the pilots. As a

group, they have been given space in the media, and as a group in society they also have some authority. The pilots have strong unions that work for them, both within the aviation system and toward the authorities. By comparison one can easily see that the handling companies, as a group, have received little or no attention in the media about the inconveniences caused by the regulatory system. Nevertheless, since the pilots have been a very visible group in the public arena who often point at the inconvenience of the system, I found it interesting to include them in the fieldwork. In the preliminary interviews, I interviewed two representatives from pilots' and crew associations and charted a basic outline of the challenges. Following from that, I presented my project and my own intentions at a meeting at Sola where the chief pilots[30] of two of the largest airlines in Norway were present. They gave the impression that they were interested in the project and that I should contact them when I wanted to start my fieldwork with them. I had set aside three months for my fieldwork at Sola and, during that time, the Chief of Security and I tried to get in contact with them for feedback on how a fieldwork could be conducted among them. We did not get any tangible agreements, and as time passed and my time at Sola was ending, I decided to try again when I went to OSL, which had already been arranged for the 2nd of January, 2009.

When I arrived at OSL, I established contact with one of the airlines and their managers located at the airport. I was able to conduct some preliminary interviews and some short informal talks with a few pilots. Some time passed without a clear agreement as to how an eventual fieldwork was going to be realised. I used my time at other places around the airport while waiting for a decision. At the end, I was offered to hang around in the lounge where the crew arrived after their flights and waited for their next flight. I tried to spend a few days there, but quickly found that it was more difficult than I had expected. This was quite a hectic place where people were arriving and going all the time. For the crew arriving, this was the place where they could have a short eating break and a possibility to relax and talk with their co-workers. My presence there was difficult to translate into all of this, especially because the crew personnel in the lounge were changing all the time, and the people I had talked with might not return for a few days or even weeks. Thus, it was

[30] Every airport has a chief pilot as a representative from each company who acts as the leader at the actual airport.

difficult to establish relationships and the information I received became very fragmented. I had hoped I would be able to follow a few crews in their daily duties, seeing what struggles they had when they had them and have time to discuss it with them afterwards. The easiest way to do this would have been through following a crew on their flights. I proposed this to the coordinator, but, unfortunately, this was difficult as they had tightened up the routines for so-called 'free travellers'. If I wanted to sit on the folding chair in the cockpit, I would have to pay full price tickets for all the flights. As this would consume more or less all of my fieldwork funding, this was not an option for me, and it became unrealistic for me to gather data this way. Since it did not work well to gather data in the busy lounge, I had to decide whether or not to abandon my plan, use what data I had gained, and direct my time to the other groups where access was easier. I decided to do that, especially having in mind that this project was not only about crew and pilots, but all groups relating to the security regulation. Thus, I decided to move on and to decide later on if I had sufficient data to include in the final thesis. In analysing the data I had gathered, the interviews I had been able to conduct with the pilots were sufficient for creating an understanding of some of their main interest areas and preoccupations. However, due to a lack of data it was not possibly to show their daily work was affected by the regulation.

4.3.3.3 Access and fieldwork roles

We can say that there are two types of access in a fieldwork situation, although these are not static. The first type is the formal access, which is essential for the realisation of the fieldwork. Bernard also points to the fact that "Issues about access vary to a considerable extent with the kind of task you are carrying out and the nature of the organization concerned" (Bernard, 2006, p. 378). In my study, the formal access was the 'make or break' point for my research. Fortunately I was granted complete access and security clearance, which meant that people could speak freely within my presence. This was a great advantage for me, as I came to learn on several occasions. Especially in meetings, this came up several times where people were about to speak, and then would ask the chairperson whether they could speak freely, or ask what kind of clearance I had. The advantages also appeared in my fieldworks when sometimes people would hesitate when talking with me and say something like "maybe I shouldn't speak about this publicly..." I could

then assure them that I was security cleared and that anything they said would be confidential. The confidentiality part was also the main criterion for me to receive the full security clearance. When negotiating about my access in the first reference-group meeting, I also had to sign a declaration of non-disclosure. Most of the security regulation is exempt from public disclosure, and this meant that my writings, whether in my field notes or my dissertation, would also, at the outset, be exempt from public disclosure. Therefore, one of the main conditions for me being granted total access was that all writings had to go through Avinor before they were made public. This entails the possibility that something I perceived to be important could be stopped from being published. This has been in the back of my mind throughout the project and is why I have explained things more generally and not in detail when I have arrived at these crossroads, and I have also tried to specify this in the text. In my opinion, detailed explications of regulations would not provide deeper understanding of the themes in this thesis.

The second kind of access is what one gets from the people one meets throughout the fieldwork. As I outlined above, my approach to explaining my presence was by putting up a poster in the Securitas break-room, for example. This approach was not perfect, but I later felt that it at least had given some of the security guards a 'heads up' to my coming there. In the beginning of the fieldworks among the security companies, I believe that I was connected to the controller role several times (besides the one already described). Schwartzman (1993) describes that this is not an untypical role to be ascribed in the field. She continues by explaining that "No matter what role one tries to adopt in the fieldwork situation, in the beginning informants will make sense of the researcher in the way that they make sense of all other strangers who appear and begin to ask many questions" (Schwartzman, 1993, p. 48). To me, this underscores that one cannot control how people should perceive you in the field, and in large fields, one cannot go around and introduce oneself to everyone. One can try to use different strategies to introduce oneself in advance of the arrival, but in the end, what really counts is the amount of time one spends in the field so that people (or at least a selection of them) become comfortable enough to talk about things that go beyond scratching the surface.

My role in the field, besides the occasional controller role, was that of a typical researcher. I was not the first researcher at the airports, so people seemed to accept my presence quite easily. There had been people doing

surveys on several occasions on anything from customer satisfaction to health, safety and environment issues among the employees. Although no studies had been done on the same scale as mine, it seemed like people quickly categorised me as 'just another researcher'. I have to admit that I felt more comfortable in that role rather than as a controller. The possibilities for participating in the various work tasks in the field were quite restricted, so there were limitations on how much I could participate. As previously described, with the airlines I could do some things (such as stowing luggage), but among the security companies, I could not participate in anything since that would have required long-term training. This is why I consider my researcher role to be closer to one of participating observer, whereby one can "... participate in some aspects of life and record what they can" (Bernard, 2006, p. 347) than the observing participant that can best be described as "insiders who observe and record some aspects of life around them" (ibid).

4.3.3.4 Ethical considerations

Every research project has the responsibility to ensure that research ethical considerations are dealt with. In research ethics we can crudely delineate between three groups of norms; first, norms concerning research autonomy and practice; second, norms governing the relationship between the researcher and the people and groups directly involved by the research; and third, norms treating the relevance research should have for society (Nasjonal forskningsetiske komité for samfunnsvitenskap og humaniora, 2005).

In my project, two major ethical concerns have been important. The first was concerned with anonymising the informants so information cannot be traced back to individual employees at the airport. The interviewees at authority and leadership level, however, has not been anonymised but are represented in terms of position and role. There has not been any demand by the involved agents to be anonymised and they have been informed of the purpose and use of the material gathered. The airports have not been anonymised but I have chosen to rename Fjellvik. This was done because an airport with only 26 employees is more exposed than airports with many employees. Fjellvik is therefore considered as a representative for small, regional Northern airports.

The second major concern has been the handling of data which, in this setting, is to a large extent undisclosed for security reasons. The thesis has

been read and approved by Avinor to ensure that the information provided in this thesis does not breach this.

4.4 Approximating the concepts of reliability and validity

The application of the concepts of validity and reliability in qualitative research is, and has been, thoroughly debated[31]. Since the concepts originated and were originally applied in quantitative research, it has been claimed that qualitative research needs to develop its own concepts for judging the quality of research (Healy and Perry (200) in Golafshani, 2003). There have been many attempts at doing this and Lincoln and Guba's alternative is probably one of the most applied. They claim that where validity and reliability have been criteria for evaluating the quality of research in the quantitative paradigm, terms such as credibility, confirmability, dependability and transferability should be essential criteria for judging the quality of the research in the qualitative paradigm (Lincoln and Guba (1985) in Golafshani, 2003). This view represents one end of the debate, whereas Morse (1999), conversely, presents a quite opposite point of view. In his journal editorial from 1999, he strongly refutes the notion that qualitative research should not consider the concepts of validity and reliability: "To state that reliability and validity are not pertinent to qualitative inquiry places qualitative research in the realm of being not reliable and not valid. Science is concerned with rigour, and by definition, good rigorous research must be reliable and valid. If qualitative research is unreliable and invalid, then it must not be science. If it is not science, then why should it be funded, published, implemented, or taken seriously?" (Morse, 1999, p. 717) Without going any deeper into the debate itself, what others have concluded is that the solution lies in how the researcher operationalises the concepts within their own research. As Robson points out, the largest problem in applying these concepts is that they have been operationalised so rigidly in fixed, quantitative research (Robson, 2002). Following the same line of thought, Golafshani concludes that "Therefore, reliability, validity and triangulation, if they are to be relevant research concepts, particularly from a qualitative point of view, have to be redefined as we have seen in order to reflect the multiple ways of establishing truth" (Golafshani, 2003, p. 597).

[31] Among others, see Golafshani (2003), Creswell (1998) and Morse (1999).

Following the typical definition from quantitative research, then, a study is reliable if it can be replicated and provide the same result if done under the same circumstances and with the same instruments (Ringdal, 2001). Validity, on the other hand, deals with whether the researcher measures what he wanted to measure (ibid). This does not apply well with qualitative research since humans and human societies are not static. However, by following the recommendations from both Robson and Golafshani above, the key term is to operationalise the concepts. This also follows what Rødne asserts: "Validity and reliability are concepts that through exact definitions stand alone in textbooks. The task of operationalising these demands within the project is to a large extent left to the individual student and research fellow" (Rødne, 2009, p. 205 [my translation]). In what follows, I will intend to operationalise this in order to say something about how I relate to the concepts of reliability and validity.

Yin explains that the goal of reliability is to minimise (as much as possible) biases and errors in a study (Yin, 2003). The thought behind this is that, if another researcher some day would try to do the same case-study as you have done, he would arrive at the same findings. While this may resemble the 'replicating' part of a quantitative study, it is not the same, as mentioned above, because doing the same case-study again is not the same as replicating it (ibid). By understanding reliability this way, the researcher needs to be thorough in the reporting of his own research and, simultaneously, be open and reflective about his own preconceptions. In this way, it connects to the themes of bias, preconceptions and fore-structures that I described at the beginning of this chapter.

Bernard defines validity as referring to "the accuracy and trustworthiness of instruments, data, and findings in research" (Bernard, 2006, p. 53). Robson (2002) explains that it has something to do with being true, correct or accurate. How can we assure ourselves and our readers that we are approaching this accuracy and correctness? It is difficult and, perhaps, impossible, but what we can do is to say something about the threats to validity or what makes research more valid. Lincoln and Guba, for instance, divide threats to validity into three main categories: reactivity, respondent bias and researcher biases (Lincoln & Guba, 1985). I have already discussed the point of researcher bias above, and the first point of reactivity is what I described briefly above in 'the issue of time', where one of the main strengths

of doing participant observation for a longer period of time is that it reduces the possibility of reactivity (Bernard, 2006). The second point, respondent bias, is about the informants' agenda, when the respondents/informants may have an agenda of their own and either withhold information or give partial information or even try to give the researcher what he thinks he want because of that (Robson, 2002). This, too may, be mitigated by prolonged involvement in the field, as this usually creates a better bond between the researcher and the respondents/informants (ibid).

With this understanding of reliability and validity, the methodology chapter I have presented here is my attempt to accommodate the necessary components in approximating what we can call a reliable and valid qualitative study. I try to elaborate on my choices, how I came to make them and where it led me. I also try to show how research studies tend to change during their course and how I then coped with these unanticipated situations. I hope this has provided the reader with an understanding of who I am as a researcher, my choices and how I carried out my project.

4.5 Summarising comments

At the beginning of this chapter, I quoted Robson, who wrote that, "The general principle is that the research strategy or strategies, and the methods or techniques employed, must be appropriate for the questions you want to answer" (Robson, 2002, p. 80). One of the main purposes of qualitative enquiries is to understand social phenomena based on rich descriptions about persons and situations (Thagaard, 1998). This is why a qualitative approach is appropriate when the goal is to *understand* a phenomenon in a given context. However, choosing an extensive field, as I have done, craves delineation in order to make the study feasible. Yet, while one has to be conservative in delineating the field, since studying 'everything' would demand a lifetime (or lifetimes), the study cannot be rigorously held down. By asking open-ended questions in exploring the field, this will help the researcher to change his questions during the process to reflect an increased understanding of the problem (Creswell, 1998). This reflexive way of doing research must be connected to the reflexivity of the researcher. Reflexivity, in short, can be said to refer to the researcher's own analytical focus on his field. This can too be seen as an ongoing process and not only designated to a reflection in the aftermath of the study. Dewalt, Dewalt and Wayland describe this as a

beginning point rather than an end point. “We need to be aware of who we are, understand our biases as much as we can, and to understand and interpret our interactions with the people we study. Once we have done that, we can strive to determine whether there are regularities in human behaviour” (Dewalt, et al., 1998, p. 290).

The aim of this chapter has been to account for how I planned and carried out my research in order to gather data that would enable me to answer the questions I had posed. I have also discussed the concepts of reliability and validity whereby the detailed explanations of my choices and approaches are my attempt to increase the reliability and trustworthiness of this study.

This case study has placed much focus on empirical research. The interviews and document-studies provided me with the necessary knowledge to understand the background of what was ‘going on’ at the airports; in hindsight, I am content with how well this prepared me for the fieldworks. Doing ethnographic fieldwork, and in my case several fieldworks, can be a very comprehensive methodological approach. It usually takes much time, so the researcher must be prepared to stay in the field much more compared to other methods. This is also the strength of the method, because it is perhaps the only method that provides in-depth insights and material in such a complex environment which would, otherwise, be difficult to reach. Therefore, in my search to understand the consequences of the transition of security regulations after 9/11, I consider that the methods I chose have worked well in enabling me to answer the questions I have posed. The empirical material of this thesis is presented in the following two chapters.

5 REGULATING SECURITY POST 9/11

5.1 Introduction

With the terrorist attacks on the 11th of September, 2001, large changes commenced that radically influenced civil aviation worldwide. In Europe, the European Union, as a regulatory agent, acted rapidly, summoning people who worked with security in the European countries to Brussels[32] to establish a common security regulation for civil, commercial aviation. Norway, as a European Free Trade Association country (EFTA), connected with the EU by the European Economic Area (EEA) agreement[33], also became part of this process.

The main aim of this chapter is to describe the regulatory transition that took place for aviation security after 9/11, described from a Norwegian perspective by the main agents on the authority and administration level in the Norwegian civil aviation system. The first two empirical questions posed in the Introduction of this thesis have been guiding this endeavour and will also be steering the end discussion of this chapter:

1. How was the security system for civil aviation transformed after 9/11 from a Norwegian perspective?
2. How was the transformation perceived by different agents within the civil aviation security system?

By asking these questions, it is possible to create an account of the moves that were made in the transitional phases, the national strategies applied by the Norwegian authorities and how all of this was perceived by the different agents within the Norwegian civil aviation system. I also contrast Norway with Iceland in regards to national strategies applied in the transitional phases in order to describe an alternative to the Norwegian implementation of the EU regulation.

[32] The headquarter of the European Commission

[33] See Chapter 2, 'Background and Context', for an elaboration of the EU, EFTA and the EEA Agreement.

In this chapter, I describe the transition process after 9/11 through the accounts of the Norwegian authorities and main agents to elaborate the motivation and work that was done to become a part of the common European aviation security regime and to gain insights into the properties of the regulation in practice. The first part of the chapter is mainly based on the interview with the Vice President of the Norwegian Ministry of Transport and Communications (MTC), which held a position as Vice Chairman in the Section for Air Traffic, and the interview with the CEO of Avinor. This is followed by the second part, which is the contrasting case of the Icelandic Civil Aviation System. This is based on the interview of the Head of Security at the Icelandic Civil Aviation Administration (Flugmálastjórn Íslands). The third and fourth part of the chapter are mainly oriented around properties of the regulation and are based on interviews with the Civil Aviation Authority (CAA), Avinor and official documents regarding national positioning toward EU regulation. The chapter is finalised with a concluding summary including the main findings presented in this chapter.

5.2 The transitional phase in Norway

5.2.1 Norway's role in the transition

As elaborated in Chapter 2, 'Background and Context', although Norway is not an EU member, the EEA agreement between the EU and EFTA makes Norway part of the European Internal Market comprising free movement of people, goods, services and capital. Norway is, thus, obliged to follow all regulations found relevant to the EEA agreement. The EEA agreement can be considered as a compromise or also as a possibility for countries outside of the Union to participate in the European market on the same level as the other EU countries. This membership in the European Internal Market has advantages but it simultaneously obliges. This is reflected in that EFTA members have to follow regulations found relevant to the EEA Agreement. To what extent an EU regulation is found relevant to the EEA varies, but in regards to civil aviation security, this normally comprises all regulations.

Due to this, Norway became included and involved in the new regulatory system for aviation security post 9/11 due to the EEA agreement. Additionally, although the Regulation (EC) No 2320/2002 was new, it was, as

Chapter 2 described, founded on ICAO's Annex 17 and ECAC's Doc 30. These two documents had also been influential in developing the Norwegian Aviation Act. Hence, when the new Regulation 2320/2002 was implemented, which to a large extent was founded on the same two documents, much of its contents was already known and, to some extent, already implemented in the Norwegian civil aviation system. The large difference, however, was that the new regulation was legally binding, while the previous regulations had only been bound by public international law to report deviations from. Thus, the liberty that each sovereign country possessed prior to 9/11 to adapt the recommendations into the national context had now ended.

Although Norway had some rights because of its EFTA membership, including that of an observer in the EU Commission, the degree of its involvement in regulatory development was not given. After 9/11, the Norwegian delegation[34] found itself very much involved in the process of establishing Regulation 2320/2002. Norway was summoned to Brussels shortly after 9/11, as were all other European Union member countries. The Vice President of the MTC was personally given a place in the EU AVSEC[35] Committee that worked directly with the development of the 2320/2002. She explained that it was a clear strategy from the Norwegians' side to be visible and participating in order to create goodwill from the EU and not be banned from the EU regulatory area. To be banned would imply that the Norwegian aviation security system would not be considered 'good enough' by the EU and could receive a 'Third Country[36]' status, whereby all passengers originating from Norway would be considered 'unclean[37]'. When the Frame

[34] The Norwegian delegation comprised representatives from the Ministry of Transport and Communications (MTC) and the Civil Aviation Authority (CAA).

[35] The AVSEC (Aviation Security) Committee is placed directly under the EU Commission

[36] The term 'Third Country' describes a country that is not a member of the European Union. It reflects a third country not a part of an agreement between two other countries. In relation to EU regulations, 'Third Country' refers to all other countries that are not EU members or EFTA members who are also obliged by the EEA Agreement (Eurofound, 2013).

[37] The terms 'clean' and 'unclean' were applied by the EU Commission after 9/11 to delineate countries that followed EU security regulations from those that did not. 'Clean' therefore refers to 'secure' airports and/or passengers, while 'unclean' refers

Regulation 2320/2002 was passed in the European Parliament and the European Council on the 19th of December, 2002, this became a concern for the Norwegians:

> For us, as an EEA country [not a EU member] the frame regulation was not legally binding, and when it was passed in the EU in 2002, there was a kind of small panic in our camp because we could risk to be treated difficultly, as a so-called 'Third Country', or 'unclean' as it is also called. To implement the regulation in the EEA Agreement took time, so what we did was to prepare the Norwegian regulation that was based in the Norwegian Aviation Act [Luftfartsloven] and we improved it. But still, it was a purely Norwegian regulation we had, while the other countries had the 2320/2002.
>
> (Vice President, MTC)

Since processing laws and regulations in the EEA bureaucracy was a time-consuming affair, the Norwegian strategy was to accommodate EU Regulation 2320/2002 by altering the Norwegian law to hold the same regulative level as the EU did. The main aim for the Norwegian authorities was, thus, to avoid being banned from the 'good company' in the EU caused by the struggle they had with the EEA processes. The main reason why the processes in the EU and the EEA were unsynchronised was that when a law was passed in the EU, it automatically took effect 20 days after it was announced in the Official Journal of the EU[38]. For the member countries, the law took effect automatically, since the EU countries had common legislation. For non-members, like Norway, this had to follow the obligations in the EEA agreement and thereafter become implemented in Norwegian law. This laborious exercise was described by the Vice President of the MTC:

> The process after something is passed in the EU is that it becomes subject to an assessment in EFTA, down in Brussels, to find out whether it is EEA relevant or not. If it is found to be relevant, we

to unsecure airports and/or passengers. If an EU or ESA inspection reveals security deficiencies at an airport, the airport is subjected to sanctions and is classified as 'unclean' (Essig, Hülsmann, Kern, & Klein-Schmeink, 2013).

[38] The Official Journal is the public journal for the EU where legislation, reports and judgments, etc., are published. Only legal acts published in the journal are binding.

> [the Ministry of Transport and Communications] receive an enquiry asking whether we consider it to be necessary with constitutional changes or technical adaptations in order to implement it in Norwegian law. We then send an answer back to them and then EFTA makes a draft to what an EEA resolution should look like. Then again we are allowed to give response to the draft before it goes back to EFTA, and now the real interaction between EFTA on the one side and the EU on the other begins. This is when it has to go through many organs in the EU. It can take half a year, it can take a year; it depends on whether it is current or not. And only when it has become an EEA resolution, can we incorporate it as a part of the Norwegian Aviation Act.
>
> (Vice President, MTC)

Although this is just a highly simplified presentation of the implementation processes in the EEA agreement, it reveals why there was always a time lag for EEA regulations. Because of this, and to compensate for the impossibility of following the same pace as the EU on regulatory implementation, Norway accommodated it by changing the national regulation in accordance with the EU regulation and, simultaneously, tried to maintain a visible and involved profile in Brussels to gain goodwill and not become a 'Third Country', an apparently successful strategy:

> I think it meant something that we were present in Brussels, being in this committee where they knew us and could ask us questions about us. Not just me, but we who were present down there told them that we are working as hard as we can. But as an EEA country we have EEA procedures and we explained that it can take quite a long time before we get it through the formal processes; through the EEA Committee and so on. Everything takes time. So the reality was that the 30th of April, 2004 we got a statute [forskrift] that had implemented the regulation plus some other regulations that the EU Commission had passed in the mean time. I remember I had decided for myself that the 30th of April would be the deadline for implementation because we could not wait any longer. I felt we had 'strained the rubber band' for so long, and as of the 30th of April, we had formally implemented the regulation. But the Commission always passes new regulations, so we always fall behind because of the EEA process. Since we 'know' them (the Commission), they give us goodwill; there is no way around that. We go to Brussels 10 times a year, we are in different committees and we know everyone.

> We wanted to be perceived as having the same standards as the other countries.
>
> (Vice President, MTC)

Based on what has been described so far, we can see that while not an EU member, Norway was summoned with all the other EU member countries when the decision was made to make a single regulation for Europe. According to the statement by the MTC's Vice President, the Norwegian authorities' strategy was to participate in as much of this work as possible and to create good relationships in Brussels so as to receive some leeway when it came to the time-consuming EEA processes. This was mended by Norway being able to get an interim arrangement, meaning that they were given a dispensation while waiting for the bureaucracy to run its course. As a sign of goodwill, Norway changed its national regulations to align it as closely as possible to the EU regulation. As the informant herself pointed out, their willingness was noticed, and they were able to avoid a 'Third-Country' status. By being a visible, although not voting, partner in Brussels, the strategy was to demonstrate a willingness to accommodate the EU regulation in a way that made it possible to avoid being banned from the EU regulatory area for aviation security.

5.2.2 Interim arrangements and national strategy

Although the Regulation 2320/2002 officially was implemented in Norway on the 30th of April, 2004, there was an interim arrangement between Norway and the EU that exempted the regional (small) airports from having full security screening procedures. The agreement stated that a total implementation was to be completed by the 1st of January, 2005. However, to implement the same regulations on all of the 26 small Norwegian airports, when many of them were situated at climatically tough and remote locations, was not an easy task. To demonstrate the difficulty the Norwegian airports had in implementing this, the Norwegian authorities invited a delegation from the EU Commission to visit some of these airports in hopes of creating some understanding of their challenges:

> What was a challenge was that the Regulation 2320/2002 was primarily intended on airports like London and Paris, in short, the large ones. And then, back here in Norway, we were supposed to

> implement it on all the Norwegian airports. We invited the Commission to come look at this here, among other things we brought them up North [to some of the small local airports]. They had never seen anything like it. They did not understand that it was possible, and while they were there at the airport, there came reindeer down at the airfield. And at some airports there were maybe just 5 or even 2 passengers. They really had an 'aha-experience'. This is why it was so important to invite them to see how we have it in Norway; how our route network is organised. In other countries they have the large hubs and then it is ok with all the requirements that are set regarding the security standard. But take an airport like Mehamn[39]. That they should accomplish the whole scale of the regulation, well, that is a challenge. Nevertheless, it was decided that Norway would implement EU standard, and that is what we have done.
>
> (Vice President, MTC)

The EU accommodated Norway's wish for an exemption for the small airports by setting the date to the 1st of January, 2005 for a complete implementation of the 2320/2002 on the small airports. This would give Norway time to do the necessary reconstructions on the airports as well as train personnel to man the security controls at all airports.

Considering the interim arrangements they were able to negotiate, the Norwegian strategy of visibility, contribution and involvement seemed to have worked well, along with the acceptance of amending national legislation while the EU regulation was pending in the EEA bureaucracy. However, Norway had no voting rights in the EU, and one could assume that Norway's ability to influence the regulatory processes would be less than the other member countries. This was not the case, however. On the contrary, the MTC Vice President emphasised how well she thought the Norwegian delegation was generally treated in Brussels, and she explained the good relationship between Norway and the EU by Norway's rapid response-time and positive approach toward the EU:

> We are treated very well in the AVSEC Committee. I hear from members in other committees that they are sent out in the hallway if a discussion becomes 'heated'. We are never asked to leave; we are allowed to be there all the way until voting takes place.

[39] Mehamn is a municipality in the northernmost part of Norway with approximately 700 inhabitants and 4 departures a day.

> I actually do believe that this good relationship stems from Norway being very rapid and positive. In addition, Norway is part of working groups alongside all the other meetings. So you see we possess a lot of resources. We are part of these groups and in addition the Civil Aviation Authority has two persons working down there. It is in these working groups things happen, and this is why we have to do a very good job, because when things are decided, we can just forget about it.
>
> (Vice President, MTC)

Thus, she indicated that this goodwill was closely connected to the active role they played in Brussels, and she considered that if they changed this active approach, things would most likely become more difficult:

> So we cannot complain. They know [in Brussels] that everything has to go through the EEA channel and they understand that, but the day we are not present there and they are not reminded of the EEA Agreement, then we can have problems.
>
> (Vice President, MTC)

Thus, Norway had no voting rights but the MTC Vice President placed more importance on lobbying and other channels for influence than on the actual voting:

> I do not think the voting is important. No, I do not think it is important at all. We are so well treated and I think that the fact that we are there, present, and that they have been here in Norway, and that we continuously remind them of the EEA agreement is the most important.
>
> (Vice President, MTC)

During this interview it became clear that this willingness to comply and accommodate had been a clear strategic choice taken by the Norwegian authorities toward the EU. The Vice President further exemplified this strategic approach through the work group on which she had participated, the National Strategy Group, a group whose main task was to establish Norway's strategic role in EEA work:

> I have recently been part of a working group [National Strategy Group] where we developed a strategy for the EEA work, and here we specifically clarified that we have to be active from the

> beginning; starting when a proposal is at the beginning. This demands great activity on our side. The strategy we developed can be passed at any time now. You can say that there are high and strict expectations of us and of us being active, and equally important is the lobbying in the Parliament. This is something we have actively thought about and seen that there are possibilities and opportunities lying there [in the lobby work].
>
> (Vice President, MTC)

Hence, active lobbying in Brussels was a way to be able to influence ahead of the voting, since Norway had no right to vote in the Parliament. The Vice President elaborated how this could be carried out:

> Then you go down to Strasbourg where the Parliament is. For instance, you go down earlier in the week when the representatives are doing the preliminary work. The representatives go down there without their wives and children, which means they are free from duties in the evenings all the week until Friday when they go home to their families for the weekend. So if there is something you want to lobby for, you go down there early. [...] This is a very nice channel, and more: it is for everyone.
>
> (Vice President, MTC)

Considering the constant need to be visible through lobbying and participation, it is conceivable that a membership would have facilitated much and made it easier for Norway to have influence. The MTC Vice President did not, however, see this as making much difference when it came to aviation security. On the question of whether she believed it would have been easier if Norway was an EU member, she answered:

> I do not think I can answer that very clearly. We have been treated so well all the time so I... I do not think it would have... Well, my personal opinion, and this is not an academic opinion, I do not think that, regarding security that is, it would change much. On other areas than security, yes, by all means.
>
> (Vice President, MTC)

It was clear that Norway's strategy of not only being a visible and contributing actor but also demonstrating willingness to compliance was effective in staying in what the Vice President described as the EU's 'good company'. Norway's strategy became clear in this interview. The intention had been to follow EU regulations, and when this became delayed because of

the EEA processes, this was mended by changing Norwegian law. It was important to have a good relationship with the EU to avoid becoming an outsider in the European aviation security system. Simultaneously, to promote Norwegian interests, the strategy was to participate where possible to forward issues important for Norway. The fact that Norway was not an EU member was not held to be important for Norwegian influence.

We now move from the arena of Norwegian national strategy and over to the national handling of the Kato Air incident, the most influential intentional attack against civil aviation Norway has experienced. As just described, Norway had achieved an interim agreement with the EU that exempted regional airports from implementing full security screenings. This incident, however, overthrew the original plan to implement full security by the 1st of January, 2005, and it was immediately ordered that it should be implemented within 48 hours. The case of the Kato Air incident is interesting, since it can be seen as a signifying act for how the Norwegian civil aviation system handled the only 'real' intentional attack on Norwegian soil. I will see this incident in relation to the similar case from New Zealand, the 2008 Blenheim Hijacking. There are two reasons for comparing the two incidents. The first is that the New Zealandian and the Norwegian governments ended up with different ways of handling extra security measures in the aftermath of their respective incidents. Secondly, although the New Zealandian government contacted the Norwegian authorities after the Blenheim incident to seek advice on how they had handled the situation, they still ended up choosing a different strategy for their national system on aviation security.

5.2.3 The Kato Air incident and the Blenheim hijacking

5.2.3.1 The Kato Air incident

As described in Chapter 2, on the 29th of October, 2004, a small Dornier 228 airplane operated by Kato Air was subject to an attack in which a passenger onboard this flight entered the cockpit and attacked both pilots with an axe. Although the episode ended with only minor injuries for the pilots, the incident caused immediate changes in Norway's interim arrangement regarding aviation security, resulting in Norway rapidly implementing 100% security screening on all Norwegian airports, in addition to decrees to

strengthen all cockpit doors. This reaction was not imposed by the EU but was a national choice. The course of these events was further described by the MTC Vice President:

> In relation to what happened with the Kato Air flight attack, the Civil Aviation Authority imposed extraordinary security measures on Norwegian airports and airlines. As soon as the 2nd of October, 2004, 100% security control on all airports (including the regional) was effectuated. Now, the EU regulation had at that time been implemented, but the regional airports had the exemption due to the interim agreement Norway had with the EU. After Kato Air, on the 2nd of October, full screening was now in place; all passengers and all luggage, etc.
>
> We had said to the EU that by the 1st of January, 2005, all the regional airports would implement the Regulation 2320/2002. So the interim agreement would give the different airports time to adjust and adapt to the regulations. For instance, there was a bit of construction work needed to meet the standards. But on the 30th of September, the day after the Kato air incident, an urgent resolution was made demanding that all cockpit doors that could be locked should be locked from now on. And on the 2nd of October, 2004, all airports had implemented the 2320/2002. [...] The choice to implement 100% security immediately was a national decision.
>
> (Vice President, MTC)

This demonstrates how regulatory practice, even within Norway, can be described as event-based. In the EU, the regulation was already in place, but in Norway, because of the interim arrangement, it took an event to implement the same standards even before the deadline of the 1st of January, 2005. In the interview with the Avinor CEO, he accentuated how the reactions from the authorities demonstrated how politically, and to some extent media-driven, the regulatory practice was in the aftermath of the Kato Air incident:

> To take the Kato Air incident, it was already decided that we should implement the regulation on small airports as well, but Kato Air led to pressure both politically and from the media that a regime should be put in place as soon as possible so that something like this could never happen again. This only goes to show how politically driven this really is, because then the politicians stood in the frontline and talked about the importance of getting this done as quickly as possible. All of a sudden it was sort of forgotten how difficult and strict they previously had felt that the system was.

(CEO, Avinor)

He also found it difficult to see the Kato Air incident in relation to international terrorist attacks. He perceived that the risks to which the Norwegian system was subjected were somewhat different than the risks facing international aviation. He did not seem sure that the regulatory system that had been constructed on the basis of international terrorist attacks was necessarily appropriate for the types of risks that the Norwegian civil aviation system was subjected to:

> It is difficult to relate to the international terrorist threat and the threat we have here in Norway, because there are different things at play. It is clear that we have, for instance, many asylum seekers here in Norway who may risk being sent out of the country if their application is denied. Many of them are located in small places, maybe in the north in small municipalities. We have had episodes, and without being too concrete, there have been revealed cases that stopped people before they got on the inside and had the possibility to hijack a plane. So there has been talk about situations where people have bought fuel and other stuff... These things are not public, and without digging any deeper into this, it is not only abroad that these kinds of plans and intents have been revealed. Thus, we can say that we have a real risk here, but then the next question is how big this risk is and what kind of consequences it can have. So we are not really talking about risks where the airplane is to be used as a weapon, in a 9/11 kind of attack, but more as a means for pressure to achieve asylum or similar things. We have had a few episodes historically where people have hijacked airplanes to achieve asylum, like in 1993[40] and 1996[41], so this is a real risk here in Norway. But then we can ask if the regulations we have implemented cover these kinds of risks. The next question is whether it is worth using more than 800 million NOK a year on it.
>
> (CEO, Avinor)

[40] On the 15th of September, 1993, an Aeroflot plane on a flight from Baku to Kiev was hijacked by three men from Azerbaijan, forcing it to go to Gardermoen, where they sought political asylum (SNL, 2009)

[41] On the 3rd of September, 1996, a Balkan Air flight from Beirut to Varna was forced to continue to Gardermoen by a Palestinian who surrendered shortly after landing and sought political asylum (SNL, 2009)

What the CEO described were actual risks in Norway, although different than the threats to international aviation, which accordingly indicated a need for a security system. Simultaneously, he questioned whether the system was appropriate for the type of risks to which Norway was subjected. However, the alternative would have been to wait until the appropriate assessments and documentations were done, which was no alternative right after 9/11, since it would have taken too much time.

> However, if you had a very high security clearance you would see that very much has been revealed that has not been talked about in the media. What comes in the media may only be the tip of the iceberg. Then you would perhaps get a better understanding of the regulation. But then again you have the question of whether we are doing the right things, whether the things we do are risk assessed enough or well enough worked through. Well... What should we have done then? Should we have waited 2 or 3 or 5 years until it was risk assessed enough? That was maybe the alternative.
>
> (CEO, Avinor)

The preceding description of the Kato Air incident explains the effects it created for Norwegian civil aviation. We now continue to the case of the Blenheim hijacking as a contrast to the Norwegian handling of this incident. I was made aware of this incident during the interviews with the Civil Aviation Authority, when one of the interviewees explained that the New Zealandian (NZ) Government had contacted the Norwegian Government seeking advice about how it had handled the Kato Air incident. The reason for the enquiry was that there had been a hijacking in New Zealand in 2008 that resembled the Kato Air incident; the 'Blenheim hijacking'. The interviewee from the CAA brought this up as an example of an alternative implementation strategy in the wake of such incidents, since the NZ Government reacted differently to their incident, even after consulting the Norwegian authorities. The NZ assessment is expounded next, based on official documents from the NZ Government.

5.2.3.2 The Blenheim hijacking in New Zealand in 2008

The Blenheim hijacking resembled the Kato Air incident to a large extent, since it was a hijacking of a small, regional flight. On the 8th of February, 2008, Eagle Airways Flight 2279 between Blenheim and Christchurch, New

Zealand, was hijacked. The hijacker was a 33-year-old Somali female who attacked the two pilots with knives and demanded the plane be flown to Australia[42].

Although New Zealand is geographically distant from the European Union and Norway, the case is interesting as an alternative approach to the Norwegian handling of the Kato Air incident. First, the two cases have significant similarities regarding the course of events and also the type of attack. Secondly, in the official documents, the NZ Government compares their national aviation security system to the OECD countries (both New Zealand and Norway are members), in which a majority of these member countries are also EU members. This means in practice that the alternative the NZ Government presented after the Blenheim hijacking was to implement a system that aligned the system found in OECD and, hence, the EU countries for their national aviation security system.

Both the Kato Air incident and the Blenheim hijacking were not defined as terrorist acts. The New Zealandian Cabinet (Government) directed officials to review domestic aviation security after the Blenheim incident. The appointed officials determined in their review, "the threat from acutely disaffected people [is currently assessed] to be **MEDIUM** (feasible and could well occur). The threat posed to domestic aviation by terrorism is currently assessed to be **VERY LOW** (unlikely)" (Ministry of Transport, 2009a, p. 2 [original emphasis]). At the time of the review, the NZ domestic aviation system only screened 57 percent of all passengers travelling within the system. The review committee developed alternative strategies in which additional security screening procedures would be "broadly consistent with international best practice and would bring New Zealand into line with other OECD countries" (Ministry of Transport, 2009a, p. 1). The new security procedures the Committee proposed were, hence, aligned with EU regulations. However, on the 18th of May, 2009, Transport Minister Steven Joyce announced that the Government would not extend security screening for domestic air travel. He announced that, "fortunately, events like the alleged hijacking in February 2008 are very rare in New Zealand. While there will always be some risk with unscreened passengers on domestic aircraft, the cost of implementing additional screening would have a disproportionate impact

[42] For a more thorough description, see Chapter 2.

on domestic aviation and is therefore unjustified, particularly in these tough economic times" (Ministry of Transport, 2009b).

The Blenheim case is interesting as a contrasting case to the Kato Air incident, as they ended up having quite different impacts. While the Kato Air incident was not decisive for the judgement of whether Norwegian regional airports should have full security screening or not, since this was already decided by the Norwegian authorities, it had an immediate effect. In Norway, full security screening was in place two days after the incident. In New Zealand, the Blenheim case initiated a review of the system and based on this review, the NZ Government, through the Ministry of Transport, decided that implementing measures on the domestic flights on the same level as international flights was disproportionate in relation to the threat level and, therefore, were concluded to be unjustified. As an alternative, additional flight deck security was implemented on domestic flights, which would make it difficult to repeat an attack like the Blenheim or the Kato Air incidents. Based on this, we see that two countries that experienced two very similar, intentional attacks against the domestic aviation system ended up with two quite different implementation strategies. We will return to variations in implementation strategies at the end of this chapter.

We now move over to the Icelandic civil aviation system, which also provides an example of a different implementation strategy, also as an EFTA country obliged by the EEA Agreement. Iceland, like Norway, was not a member of the EU. Iceland had, however, an exemption from EU security regulations for its domestic aviation system. Next, I describe the Icelandic civil aviation system regarding its security strategy, mainly based on the interview with the Head of Security (HoS) at the Icelandic Civil Aviation Administration.

5.3 The Icelandic Version of EU regulation

Iceland is a small island country located in the North Atlantic Ocean bordering the Arctic Oceans. It is the smallest of the Nordic European countries with a population of about 300.000 people in 2010. Its location between the continents of North America and mainland Europe has made it a place for stopovers on the transoceanic flights. Reykjavík, the capital, has two airports: Keflavík and Reykjavík. Keflavík is its main airport and works as a hub for international traffic, while Reykjavík handles mostly the domestic

transportation as well as flights to Greenland and the Faroe Islands that are not subjected to the EU regulations.

The interview data presented here is mostly based on the interview at the Icelandic Civil Aviation Administration (Flugmálastjórn Íslands). One of the two representatives at this interview was the Head of Security (HoS), who was very much involved in the transitional phases of security regulations in Iceland after 9/11. The Icelandic system was small and transparent, and she was recommended as someone who had a good overview of how the Icelandic system had been transformed after 9/11.

5.3.1 The construction of the Icelandic security system

While Iceland and Norway were different with regard to geographic location and size, they had some common features: as non-members of the EU, both were still strongly affected by the regulations, both were small countries with many small airports where the maintenance and upholding of the regulations was largely part of regional politics, and both were obliged by the EEA Agreement. However, where Norway had applied for an interim agreement in relation to the security Regulation 2320/2002, Iceland had applied for a complete exemption from the security regulation on domestic aviation. The background for the exemption was largely based on Iceland's distance from the rest of Europe, together with the aircraft size that operated these domestic routes. This was elaborated by the Head of Security (HoS) from the CAA:

> Our main argument at the time was the distance from Europe. With the type of domestic fleet we have – I mean, the biggest ones are Fokker 50s and their ranges… I mean, if they would leave Iceland with the intention to do terrorist activity they would be intercepted long before they would reach the target. But mainly it was the distance from the European Union and the type of fleet we have.
>
> (Head of Security, CAA)

Since Iceland was located so far away from mainland Europe, hijacking was not considered to entail the same risk from Iceland to the rest of Europe as other countries closer to mainland Europe would. The Fokker 50, which mainly operated the domestic flights, was a propeller aircraft that carried up to 62 passengers. Both the range of the aircraft and its capacity made the risk of

hijacking with the intent to cause impact on mainland Europe small. This formed the basis of their application for an exemption from the EU regulation on security on domestic flights. The largest gain for the Icelandic Civil Aviation System, in having this exemption, came from having more lenient security demands on their regional airports:

> Having these small airports like you also have [Norway] – I mean we have scheduled flights to some of them perhaps three times a week or one flight a day. We have maybe one person who looks after the airport, who lives close to the airport. He comes up when there is a flight and closes the airport after the flight leaves. So I mean, both the cost/benefit, the risk assessments made and as I said the fleet… that was the argument. And to apply full security measures at these airports… you don't even have the facilities. You would have to build new terminals et cetera for one flight coming three or four times a week. As I said, the risk assessments were made and we did not see the need. The state police make a sort of risk assessment for these flights – and they have been valued as low risk.
>
> (Head of Security, CAA)

It was clearly considered as an asset to them that they were exempt from the cost and work of implementing security regulation on these small airports. This also left the risk assessments to be done on the national level, with the state police performing the risk assessments for each airport. For small countries, one of the main challenges of Regulation 2320/2002 was that it was designed for large airports in large systems. Implementing the same measures at small airports created situations where one or a few persons had to occupy several roles and jobs at once

> Even I have to wear many hats [in the Civil Aviation Administration]. This is so much easier for larger airports where people have dedicated assignments and tasks and don't have to split themselves in multiple directions and tasks. And I mean the risks are higher in certain places in the world compared to here. Many of these regulations that come, we say 'WOW, how are we going to implement them here?'
>
> For example we were discussing something the other day, say for instance the new cargo regulations, it is so complex, and it is so obviously made to fit into a setting where you have hundreds of known containers and a hundred regulated agents, and… ok…. We

> have four [laughing]. We have no problem to keep track of those four regulated agents, and we could do it all in a much smaller scale, more easily, but today we have to go this way according to the instructions in the regulation and we prepare all the documentation. I mean, a lot of these things are based on the fact that you cannot have an oversight of what is going on, and for us you could easily have oversight of all airports, except maybe Keflavik since Keflavik is rather big in that perspective. But for all the others and at least with the traffic of today you don't have any problems. You don't have non-stop traffic during the day and they are closed during night-time.
>
> (Head of Security, CAA)

In Iceland, they had four agents who handled cargo and, hence, were easily monitored. The small scale of the Icelandic system would have made the cargo agents easy to monitor, as they had been doing before the new cargo regulation arrived, and it would also have been the most economic way to handle this. Since the cargo area was subject to EU regulations, they were obliged to follow instructions laid down through the regulation. It also demonstrated the division between Keflavik, as the main airport, and the rest of the Icelandic Civil Aviation System, which mainly comprised small airports that were easy to survey with little traffic and few employees. These airports were, like their Norwegian siblings, part of a regional politics plan, since people lived scattered all over the country. Thus, the airports were connecting the small places to the larger ones and providing other kinds of services, such as medical assistance to remote locations.

So far we have seen that the largest difference between Iceland and the rest of the EU countries (Norway included) was its geographical location, in addition to the aircraft operating in the domestic aviation system. This formed the basis for their exemption. However, this did not explain why they had not implemented EU security measures for their own benefit. They had obviously made a different assessment than Norway had. It was clear that the CAA did not perceive the risks the EU security system was designed to handle to be equally relevant in the Icelandic setting:

> We hear about things that happen in other countries, but here in Iceland… nothing will ever happen to us you know. This is Iceland, we are 300.000 people. Who is going to come here and want to do some great damage? It will not affect anybody in the big picture [laughing]. And even if they attempt to ruin Keflavik airport, ok…

> the small percentage of passengers that cross the Atlantic will be affected. I don't know exactly what the percentage is, but we have less than 2 million a year. So even if they did a total destruction of Keflavik they would not even affect one percent of the passengers going across the Atlantic. So, I don't know, the only thing I really can see they might want to do is to use the possibility of Iceland to go from one continent to the other. To come here and do some real physical damage to get the attention of the world; I don't think it is very likely. Then you have the mentally disturbed. I mean, you never know what they can do.
>
> Of course we [Iceland] are different in many ways, but now I'm not talking on behalf of the CAA, but you can say that you find many areas where you have much more risks – more riskier areas – in the world than anything you will ever find in Iceland. But when it comes to international flights, we see that the hazard is the same so this is why we are in full compliance with the EU regulations.
>
> (Head of Security, CAA)

Hence, based on the domestic risk-assessment, Iceland was deemed to be a low-risk area when considering the type of risks the EU security measures were constructed to prevent. Keflavik, on the other hand, as the main gate out to the world, was considered to be as risky as any other European airport, since risks travel within the system because of the principle of One-Stop Security[43]. Iceland was also considered an 'outsider' when it came to risk of domestic attacks, and the possible impact of such an attack was played down. This led us over to the Kato Air incident, since this had had a great impact on the Norwegian security system and how risks for intentional attacks were considered to be an actual threat to the civil aviation system.

> Yes, of course there were discussions. We discussed the Kato Air incident. This was not an act of terrorism, but the other threat, the mentally disturbed. Of course we have the same threat in Iceland.
>
> (Head of Security, CAA)

It may be reasonable to believe that if such an incident were to take place in Iceland, there would have been consequences for the domestic security system. However, this did not necessarily seem to be the case. On the

[43] See chapter 2 for an elaboration of One-Stop Security.

question of what would have happen if a similar attack were to happen in Iceland, the HoS reflected around this issue:

> (Sighs) Very good question, but honestly I do not have an answer to that one. It would depend on the seriousness and what happened… but… I think that these exemptions we have in our domestic air traffic – it is so valuable for us that it would really have to be a serious incident for people being willing to – or even look at changing the setup we have today.
>
> (Head of Security, CAA)

What she stated here was that the Kato Air incident had created discussions around the Icelandic system. However, the HoS was simultaneously very clear in that the exemption from the EU regulation was very valuable to them, because it gave them the possibility to govern the domestic system independently. This was held as so valuable that even if a similar incident were to happen, she assumed that they would most likely continue with the same system as they already had.

Although Iceland had not implemented the EU regulation on domestic flights, this did not mean that they had nothing at all:

> We have measures for domestic flights. We check people working at the airport with ID background check and we check boarding passes and IDs, but with the new regulation from the EU this will be obsolete. We have reconciliation of baggage et cetera! So there is always something. But our main concern in domestic traffic is all the tourists coming here travelling around Iceland bringing with them gas cylinders for their cookers. And they put this in their baggage and that is something you really don't want to see because we are really concerned about this. I don't know how many gas cylinders we confiscate every year, especially during summer time. But that is safety and not security!
>
> (Head of Security, CAA)

Hence, there were measures taken, but the measures were not completely aligned with the EU standards. This demonstrated the possibilities the Icelandic exemption provided: it provided them with the possibility to do local assessments, and based on these, establishing what was considered to be sufficient measures in their particular context, this way not separating as sharply between the safety and security areas.

Another alternative this local adaptation also rendered possible was to implement a so-called 'footprint' of the security regulation. During the summer months, they also had some international flights from other airports besides Keflavík, and they applied a footprint instead of implementing full security screening on these airports:

> For example, in Akureyri there used to be some flights where you don't have any transfer or transit, it is only a flight from point A to B, period. But we still applied the 2320/2002 regulation, but only as a footprint. This is only necessary in the peak season. There are no international flights in Akureyri in the wintertime. But from June till September there are about two flights a week. Those two times, there is no problem setting up the security measures you have and then you keep people trained. I mean it is lots of work for two flights during the peak season, but it is still the optimal solution.
>
> (Head of Security, CAA)

This meant that when they had an international flight to one of the airports that ordinarily just had domestic flights, the security footprint made it easy to mobilise full security routines during the operation of the flight before it was demobilised again and left as a footprint. This was implemented as an alternative to having security at all times.

In addition, Reykjavik airport operated flights to the Faroe Islands and Greenland that were not subjected to EU regulation. They had flights 3-4 times a week with small aircraft, such as the Fokker 50:

> The state police on Iceland did risk assessments at the time and assessed that the risk was minimal for these two flights. But I DO NOT ALLOW [this statement was accentuated by voice and gestures] international scheduled flights to any other countries than Greenland and the Faroe Islands from Reykjavik airport.
>
> (Head of Security, CAA)

In summary, we can say that the Icelandic system was separated into two parts. Keflavik followed the same standards and regulation as any other EU airport, while Reykjavik operated as the hub for domestic flights and flights to other non-EU locations, such as the Faroe Islands and Greenland. Because of their exemption for the domestic aviation system, they were able to 'sort of eliminate the EU part', as the HoS from the CAA stated, from the Reykjavik airport. While the interviewees were very firm in their following of the EU

regulation on all international traffic, it was simultaneously seen as a clear advantage to not have it implemented in totality on the domestic system.

Thus far, the focus has been on how the security regulation was developed and implemented post 9/11, including variations in implementation strategy. We now shift the focus over to describing the regulation in more detail, how the main actors in the Norwegian civil aviation system perceived the regulation and its impacts, and what consequences the regulation was conceived to have.

5.4 Properties of the security regulation

The aim of this part of the chapter is to take a closer look at the regulation itself, its properties and implications. These descriptions, given by the main actors in the civil aviation system, will provide a more profound understanding of the inner coherence between the main actors, the construction of the regulation, and the consequences resulting from the implementation. The interview data presented here was gathered through interviews with the Legal Department and the Security Department at the Civil Aviation Authority (CAA), the CEO and the Chief of Security (CoS) at Avinor's Central Office, and the Vice President of the Ministry of Transport and Communications (MTC).

The three main actors involved in the security regulation and its enforcement were the MTC, CAA and Avinor[44]. In short, we can say that the MTC 'owned' the regulation, the CAA enforced it, while Avinor (and the airlines) were obligated by it. The MTC Vice President described the inner coherence between the main agents like this:

> The Ministry of Transport and Communications (MTC) is the regulation administrator, but it is the Civil Aviation Authority that enforces the regulation. They are the executive body. The MTC have the superior responsibility as the administrator of the Aviation Act while the CAA administers single cases according to the regulation. Next, the airports are obliged to perform their tasks according to the regulation, which is Avinor as the airport operator, the airlines that are placed at the airports, the companies handling goods, cargo, mail, catering, etc.; they all have duties according to the regulation. Then it is the CAA as an inspectorate who control

[44] See organisational map in Chapter 2, 'Background and Context'.

> that the regulatory standards are followed. Next, we have the EFTA Surveillance Authority (ESA) in Brussels who come to inspect whether the regulation is followed or not. They go around seeing if the airlines follow the regulation, whether the employees follow the regulation doing proper screening, etc. Then they write a report, with a copy sent to the CAA and one to the airport. If there are revealed errors, there can be consequences, where the worst is the 'article 15' measure which means that all passengers travelling from the airport in question are unclean. The article 15 is a Commission decree pursuant to the 2320/2002 regulation.
>
> (Vice President, MTC)

In Norway, the CAA performed all airports audits and audits of the companies belonging to the airports, while the ESA (EFTA Surveillance Authority), as EFTA's control organ, in effect audited the CAA. An Article 15 designation was a strict punishment for any airport that involved much work for the airport employees to get the standard back up to the level demanded by the CAA and that was also economically costly. In addition, an Article 15 caused inconvenience for passengers who had to go through new security screenings when arriving from the 'unclean' airport, causing stress to both passengers and security guards. Thus, the unclean airport transported its problems to the receiving airports, which again caused extra work and use of resources at the receiving airports. It was easy to conceive that Article 15 airports were very unpopular among the other airports. For example, after one European airport (that shall remain unnamed) received an article 15, Sola Airport had to go through excessive work and stress receiving passengers originating from there. The Chief of Security reported that the arriving passengers had to wait several hours for new security screenings, which caused difficult situations and confrontations between security guards and passengers. Many security guards had to work overtime, and there were later reports that they had experienced the situation as straining, stressing and also abusive, to some extent, since they had been the front line toward the stressed passengers. The reason why they had to be security screened again was that the unclean passengers could not be mixed with the clean passengers at the airport, since this would make all the passengers unclean. This demonstrates not only why it was important for the airports to pass the CAA inspections without remarks that could lead to an Article 15 designation but also what kind of sanctions were available to the CAA and the ESA.

5.4.1 One-Stop Security

The consequences and sanctions described above had large impacts for the One-Stop Security system. As described in Chapter 2, the principle of One-Stop Security was that every passenger should only be subjected to a security screening once. This was described more contextually by the Chief of Security (CoS) at Avinor's Central Office who connected the principle to the security regulation:

> The bearing principle in the security regulation is what we call 'One-Stop Security'. The passengers should not be subdued to more than one security control. This means that if you are going from Hasvik[45] to Rome you travel for instance Hasvik – Tromsø – Oslo – London – and then Rome. Then the security control in Hasvik is the only control you go through and which classifies you as a 'clean' passenger. This principle was set down many years ago; long before 9/11. You can say that prior to 9/11 you had a much less complex regulation. It was, let us say naive, less complex, more liberal, less demands, simpler control. But even then, you see that it was a regulation based on the threat level of that time, there were plans of escalation in case that the threat scenario changed. You could gradually implement stricter control if the threat level was raised.
>
> (CoS, Avinor Central Office)

However, since One-Stop Security was developed and implemented prior to 9/11, it can be said to have entailed different properties prior to and after 9/11. As the CoS at Avinor also explained, it entailed 'more naive, less complex, more liberal, less demands and simpler control'. After 9/11, they made the highest level of escalation the foundation for the 2320/2002 regulation:

> What happened 9/11 was that all the levels of escalation became the general regulation. The whole system took a heavy lift in 2001 and became significantly stricter. And it was done in a very short amount of time.
>
> (CoS, Avinor Central Office)

In other words, the regulation rapidly escalated in the level of strictness. This leads us over to descriptions of the regulation; approximating the key

[45] A small airport in the North of Norway

properties of the security regulation as it was described by the main actors of the civil aviation system.

5.4.2 Secrecy, reactivity and rapidity

In the interview with the (juridical) Senior Advisor at the Legal Department at the CAA, the Regulation 2320/2002 was described in terms of secrecy, reactivity and rapidity. The description mirrored first, that most of the regulation was secret and not open to the public, second, that the regulation was developed based on previous events and third, that the process of implementing the regulation happened very quickly after 9/11. The Senior Advisor from the CAA began by describing the reactive property of the regulation:

> Historically, security has always been steered by events. This is well depicted with Regulation 2320/2002 which was quickly put in place after 9/11 regarding passenger, baggage and cargo-screening routines. The same thing can be seen with the 'liquid ban' implemented in the regulation after the 'Transatlantic Aircraft Plot' in 2006[46]. Immediately after revealing the attempt of the terrorist group, a liquid ban was carried out. First, this ban included all liquids, but was later adjusted into the limit of allowing passengers to bring 100ml containers in their hand luggage. This demonstrates the very reactive way regulation is applied in security, where the events govern the development of new regulations.
>
> (Senior Advisor, Legal Department, CAA)

Thus, we can see that regulatory development of security worked reactively, basing it on the thought of preventing similar attacks. The time it took from when an event occurred until a regulation was implemented was also described as quite unique for security regulations. The Senior Advisor from the CAA exemplified this through the Kato Air incident:

> Security is quite unique in the rapid way new regulation is developed and implemented. The time span between event and regulatory implementations is very short. It can be as short as a couple of days. In Norway, the Kato Air incident can illustrate how regulation works after an event at the national level. After the Kato Air incident, full security was implemented within two days. This

[46] Described in Chapter 2, 'Background and Context'

> demonstrates the direct effect of an event where Norway immediately decided to implement regulation; even before the time limit of the EU expired.
>
> (Senior Advisor, Legal Department, CAA)

The last key property of the security regulation was secrecy. The level of secrecy present in the security regulation was unparalleled, compared to other EU regulations. This has been exemplified through the 'list of prohibited articles', a list drawn up by the EU specifying items that were prohibited for passengers to bring onboard in carry-on luggage. These listed items were considered to have potential for causing damage and/or injuries to aircraft and/or people. This list was secret after 9/11, which meant in practice that passengers could not know which articles were prohibited or not. This antagonistic practice was brought into the public light through the so-called 'Heinrich case', in which Gottfried Heinrich, on his way to a hobby tournament in tennis, was denied boarding because he was bringing with him his tennis rackets (Austrian Times, 2009). What was special in this case was that the information that tennis rackets were prohibited items was secret, which in practice meant that Heinrich had no way of knowing this. He had already passed the security control, and was thereafter denied boarding at the gate. Heinrich brought the Austrian Authorities to the European Court of Justice where the judges ruled in favour of Heinrich, underscoring that the list of prohibited articles could not be enforced as long as it was secret and the passengers were unable to know what was, and was not, prohibited (Austrian Times, 2009). The Senior Advisor at the CAA explained that the Heinrich case had demonstrated to have major impacts on the discussion around secrecy of the regulation in the EU:

> This case had large consequences in the EU because it questioned whether a regulation could be valid or not if it was not published in the Official Journal. Afterwards, there were large negotiations in the EU court because the case treated a fundamentally important question to the Commission. What happened during this process was that the Commission acknowledged that they could not continue to keep the regulation secret the same way as they had done prior to the case. A new approach was installed where all regulations are split in two with one public and one restricted version, where the latter contains the detailed information. The first thing they made public was the list of prohibited articles, which is a direct response to the Heinrich-case.

(Senior Advisor, Legal Department, CAA)

The secrecy property had other consequences also. The Vice President of the Ministry of Transport and Communications brought it up in relation to the consequences secrecy had for involvement since it often entailed closed hearings or at times no hearings at all:

> Most of the regulations are secret, which means that we are not allowed to have hearings. Then we arrange what we call closed hearing groups on things that are secret. On these occasions we have a duty of confidentiality. This opposes my sense of justice; that you cannot send out cases on hearings. In principle, everything should be published on the internet, but the thing is that we are not allowed to do so. The kingdom of Norway has entered into an agreement with the EU and when something is EU restricted, it receives a restriction according to Norwegian law. In comparison, when upcoming regulations are public, which happens sometimes, they are put out on hearings; we have large hearings. We are completely dependent on input from these hearings. When something is passed in the EU, we seek advice from affected actors to the extent it is public. But sometimes it is super secret. Take for instance regulations on calibration of the detectors in the security control. Some of this is so secret that it never even crosses the borders. We are only allowed to read them in Brussels, for instance; signing them out and in again. But that is understandable.
>
> (Vice President, MTC)

What she described was a kind of dual view on the process of regulatory development. While it was understandable that regulations were secret, as the case was with for instance calibration of equipment, there were something principally wrong with closed hearings or not having hearings at all; something that also opposed the specific instructions in the Norwegian Public Administration Act[47] for ensuring democratic and ethical handling of public administrative cases. She continued to describe that the input they received when hearings were open was an important source for them. The fact that this was removed because of the secrecy was considered a negative outcome.

Above, the focus has been on the actual properties of the security regulation; describing its 'architecture'. We now continue with investigating how the regulation got constructed: what was influential in developing the

[47] Described in Chapter 2, 'Background and Context'

security regulation. In the next part, we first take a look at how safety regulation influenced security regulation, and thereafter we look closer at how opportunities and degree of freedom differ between the two regulations, even though they were based on the same construction model.

5.4.3 Security regulation follows traditional safety regulation

Since there had not been any regulation like the 2320/2002 prior to 9/11, there had to be something that guided the EU in constructing the new security regulation. According to the CEO of Avinor, the EU had used the same approach as had been applied for decades within safety, or accident prevention. The CEO of Avinor described the background for safety regulation and its relationship to security regulation:

> Aviation, in general, uses relatively long time on the implementation of new regulations, especially international regulations. The background for the development of security regulation is taken from safety; the traditional accident prevention that has been worked with over many years. Thus, the constructing of the regulation is highly event based. It builds on investigating incidents and using time to implement new technology and new procedural regulations.
>
> (CEO of Avinor)

Here, he brought in the aspect of time and that the necessity to use time in developing new regulations was traditionally anchored in certification; making sure that the regulation worked as intended:

> The reason for using relatively long time is that you want to certify. You want to document the safety profit both on new technologies and new procedures. Doing things this way has a long tradition, and although it sometimes may seem like a very 'slow' process, since you have to involve the international organisations like ICAO and Eurocontrol, on the whole I think it is a good and positive system because you document that things do in fact get better.
>
> (CEO of Avinor)

The time aspect, then, was essential in regulatory development for safety; documenting that the procedures worked well before getting included in the regulations. In addition, the CEO accentuated that analysis was done by professionals, as risk professionals or regulatory developers. This was not

done in the development of the security regulations after 9/11. According to the CEO, in security regulation, the time aspect was not followed and secondly, the regulations were not developed by professionals but largely politically driven:

> What happened after 9/11 was that it was not the professionals, the risk analysts or the regulatory developers within aviation that were the driving forces behind instating a new, stricter regulation on security. It was mainly politically driven. In many ways you can say that the documentation and the analysis that informed the decision to implement a stricter regulation was inadequate. If we compare it to how new anti-collision systems, navigation systems and ways to communicate between air traffic control and pilots have been developed, you see that these things were implemented very systematically and thoroughly, while in security it was first 9/11, mainly, and then a couple of other incidents that pushed regulatory development to such an extent.
>
> (CEO of Avinor)

This illustrates how the regulatory development on security followed the same principles as regulatory development within safety, while not following the processes for documentation and analysis that formed the basis for regulatory developments within safety. Thus, there has been a partial transfer of the principles for regulatory and technological development taken from safety.

While the development of the EU security regulation had been using safety regulation as a model, the possibilities that lay within the two regulatory types were different. This will be further described next.

5.4.4 Differences between safety and security regulation

One of the major differences between safety and security was the possibility to do risk assessments. Avinor, as airport operator, was obliged to perform risk assessments both on safety and security. In short, these risk assessments could, for instance, reveal whether certain measures or procedures could have consequences for other procedures or areas, or risk assessments could be used to determine what would be sufficient measures to implement in order to assure that a certain level of safety was maintained. Within safety, this was how risk assessments were applied. Avinor was able to influence and develop alternatives to the regulation, based on these

assessments. This was often done in dialogue with the Civil Aviation Authority:

> On the safety side, I would say that the possibilities for influencing through risk assessments have increased. When we apply for changes or exemptions from the framework of international and national regulations, Avinor does risk analyses to document conservation or improvement of safety. In other words, we do risk assessments every time we want to do something different than what the regulation describes. We think that we have sometimes found, also through dialogue with the Civil Aviation Authority, better and more favourable safety solutions where we deviate from the regulations. This is especially so for the regional, small airports where we can find alternative technological and procedural solutions, sometimes also more economical, than the ones described in the regulation. So through safety management, where a combination of risk analyses and a close following up on all reported events and incidents is applied, all this has a role in improving safety. We think we are managing this in a good way now and we also have the CAA involved in this.
>
> (CEO of Avinor)

The possibility to apply risk assessments as a foundation for adapting certain parts of the regulation to the actual context and, thus, obtained more tailored solutions, saved resources and instead placed them where analysis showed that it was needed. The CEO explained that they did not feel that they were at the same place with security as they were with safety:

> In security, we are obliged to have an overview of the risks and we are also compelled to assess vulnerabilities. But then you have the prescriptive regulation as a foundation, and although we do analyses on vulnerability in addition to the regulation that already lay there in detail... Well, as I say, it is hard to get approved deviations or adaptations from the regulation through that kind of risk assessments, so you do not have the same benefits that you have in the safety area. This is mainly because the security regulation is not risk based.
>
> (CEO of Avinor)

The fact that the regulation was prescriptive made it difficult to implement risk-based solutions within security. Risk-based regulation can be seen as a type of goal-based regulation (as described in Chapter 3), in which the goal to be achieved is defined without prescribing how to achieve it. In a prescriptive

type of regulation, on the other hand, procedures and measures are predefined in detail. Here, some of the main differences between safety and security emerged. It was evident that the degree of involvement was higher within safety regulation. Safety followed a more risk-based approach, whereby regulations were based on, adjusted or adapted according to risk assessments. Within security, on the other hand, it was expected that Avinor had knowledge about vulnerabilities and risks, but the regulation would not be altered or adjusted based on assessments they made that would deviate from the Regulation 2320/2002. The only possibility for adaptations was to apply even stricter measures than the predefined EU measures. This was described by the CEO:

> It gets very challenging when you have a very detailed and prescriptive regulation on both technical and operational side that you, to a very small extent, can deviate from. Thus, it becomes kind of strange, since you, in these risk assessments, often reveal that you should have redirected your resources to somewhere else than where you actually use them. Consequently, the cost/benefit element becomes difficult because you are instead obliged to put even more on top of what initially is both costly and detailed. So this is challenging.
>
> (CEO of Avinor)

Although there were rarely any adaptations or assessment-based solutions because of the level of detail, there had been a few occasions where Avinor had been allowed to adapt the security regulation somewhat:

> With this said, there are some places where we have chosen different solutions based on assessments. For instance, it can be things regarding fences and surveillance, where you have a quite desolate area with ocean on one side and a mountain on the other, which is sometimes the case on the small airports. And in situations like this, when discussing the amount of money we should use on fences and barriers, we have partly gotten through that it is possible to use money in a different way.
>
> (CEO of Avinor)

It was clear that when operating according to a very prescriptive and detailed regulation, it was valuable to be able to have some influence in the execution of the design, as was more possible within the safety regulations.

Since there was very little possibility to adapt the regulation in the national- or airport-context because of the level of predefined details and prescriptions, a way around this could be to exert influence prior to the implementation of the regulation. Next, we take a look at the possibilities these main actors of the civil aviation system perceived they had.

5.4.5 Possibilities for influence

While regulation prior to 9/11 was mainly a national concern, this moved outside the borders after 9/11. The Senior Advisor from the Legal Department at the CAA described the consequences this had for influencing:

> If we connect this to the role of Norway, we can say that in principle, we can come with input within all areas of the EU system. This is due to the EEA agreement which makes the EU obligated to listen to what we have to say. In practice, if we are talking about security, this is difficult to carry out because the regulatory processes happen so rapidly. It is not like we receive a paper and then after maybe a year we can discuss it; thus having plenty of time to assess. No, everything happens really quickly. However, hearings are organised in connection to new regulations, but what happens is that because of the traits of the regulations, mainly that the processes are rapidly carried out [when they cross the Norwegian border] and that they are very often secret, the hearing will work more as a channel for information than a channel for elaboration. The regulation will usually already be passed before the hearing and in practice this means that the possibility for influence is very low.
>
> (Senior Advisor, Legal Department, CAA)

In effect this meant that although hearings were held, the properties of the security regulation precluded involvement in the development and preparation of regulations that were going to be implemented in Norway. The function of the hearings was therefore, in practice, mostly for informational purposes. This followed much of what the CEO of Avinor also described about his perception of Avinor's involvement in the regulatory process:

> We have very limited possibilities for coming with input on regulations. Maybe through a quick hearing or a meeting, but it is relatively limited in that area. Within other kinds of regulations, there are quite long-term processes with rounds of hearings where it can take a couple of years from the first draft or proposition till it is passed. On security there has not been the kind of processes where

> we have had much possibility to come with comments and in cases where we could do so, it has to a very limited extent gotten through.
>
> (CEO of Avinor)

It became clear that the possibilities for influence were severely limited after regulations first were implemented in the Norwegian system. To have influence, then, it was necessary to be involved in the processes in the EU or through the international organisations that worked toward the EU. This was elaborated by the Chief of Security (CoS) at Avinor's Central Office:

> We have informal meetings with both the Ministry of Transport and Communications and the Civil Aviation Authority which gives the governmental bodies input, like general information, our stand on different issues, opinions and assessments, to take with them when they go to their authority meetings. Then we bring the same input into the ACI [Airports Council International][48] meetings. ACI is a giant actor globally and have considerable competence and capacity on lobbying in Brussels.
>
> (CoS, Avinor Central Office)

Although there were meetings and forums where security was discussed nationally, the only way to have any real influence was to work towards the EU, either through cooperating with the Norwegian authorities or through interest organisations such as the ACI. When a regulation had crossed the Norwegian border, it was to a large extent fixed and settled.

The Chief of Security at Avinor perceived, however, that Norway had a voice in the international setting and that it was possible to find some of the Norwegian standpoints in the development of new regulations:

> Actually, Norway does not have any less influence in the ACI considering that we are a small country. It all depends on how competent you are, how well you prepare and how you work. We can recognise Norwegian attitudes, standpoints and formulations both here and there.
>
> (CoS, Avinor Central Office)

[48] Airports Council International (ACI) is an international interest organisation that represents 580 members who operate 1650 airports in 179 countries. The security committee in ACI cooperates with organisations such as ICAO, ECAC and the EU on issues relevant to the airports they represent (Airports Council International, 2013).

Thus, it is possible to say that the arena for influence had moved from the national to the international level. However, in order to nuance the discussion on influence through interest organisations, an example from the interview with one of the national leaders of SGS (SAS Ground Services) demonstrated how they perceived the transition had led to less influence for the handlers as a group. Prior to 9/11, the handling companies had been just as involved in national regulatory hearings as other work groups. With the phasing out of hearings as a channel for influence nationally, the handling company, SGS, became included in the SAS airline organisation where SAS was organised through a European airline organisation that worked toward the EU. Within this new organisation, the leader perceived that the handlers became more placed in the background of the other working groups as pilots and cabin crew. Therefore, although the handlers *were* represented in the EU, the factual influence for the handlers was perceived to have declined.

In order to sum up, the channels for influence had become predefined (through authorities and interest organisations), and arenas that had been in use prior to 9/11, such as the hearings where there had been a larger possibility for direct influence of the affected parties, had changed contents to become a more or less purely informational channel. This moving from the national to the EU setting also had consequences in that different parts of an organisation could experience to have different degrees of influence.

5.5 Risk-based regulation

The Ministry of Transport and Communications (MTC) were primary actors in the transition period after 9/11, together with the Civil Aviation Authority (CAA). However, according to the interviews with the CAA, it was not until 2005 that the CAA's Security Department, in the state it was at the time of the interviews, were established. The interviewees had, therefore, not been part of the transition in the same way as the interviewee at the MTC. As described in Chapter 2, the CAA is the competent authority responsible for advising the MTC on issues regarding aviation. The CAA's Security Department is, therefore, an advisory authority for the MTC (Samferdselsdepartementet, 2010). This is why I found it relevant to interview representatives from the CAA's Security Department to be able to understand more of the direction that Norwegian aviation was moving in, or stated differently, the direction of the national strategy at the time of the interviews.

Based on the interviews at Avinor's Central Offices and in Iceland, there were some issues that had crystallised, including prescriptive as opposed to risk-based regulations and the appropriateness of having the same regulation for all Norwegian airports. These formed the basis for my interview with the CAA.

5.5.1 Status on regulatory strategy

During the interview with the CAA representatives, it was quickly stated that the CAA was satisfied with the security system as it had been accomplished in Norway. This was underscored by one of the Security Officers (SO):

> The CAA's stand is that we want to maintain the system of today. If we were to scale down it would inflict great costs to the large airports, and in turn it may entail that all the large airports have to be reconstructed.
>
> (Security Officer, CAA)

What he meant by 'scaling down' was that if the system were to return to the pre 9/11 state, the large airports would have to be reconstructed in order to work as hubs, much in the same way as Keflavik International Airport did. The conclusion seemed thus to be that since all Norwegian airports at that point had implemented the security regulation, this was maintained as the most reasonable solution for the continuance of airport security. The argument seemed to be mostly of an economical character.

During the interview we discussed the Icelandic implementation strategy. I asked them how they perceived the Icelandic system, which had applied for an exemption to the national aviation system. The SO explained that he perceived Iceland as a completely different setting and that Kato Air was critical for Norway and Norwegian aviation:

> That there have been incidents in regional airports results in that politically, it would be difficult to not have the same security level on regional airports. [...] You can imagine ending up with a system where all regional airports are defined as unclean, but I doubt it would be political sympathy for such a solution. And this in spite of many being negative to the security regime we have today.
>
> (Security Officer, CAA)

The Kato Air incident was presented as a decisive force for the Norwegian implementation of security regulation. Consequently, the Kato Air incident received a legitimating status for the implementation. It demonstrated the need to have security screenings at all airports, including the regional. Later, the other SO added that he believed we would see changes in the Icelandic system if they were to have an incident similar to the Kato Air incident. He seemed to be convinced, in other words, that Iceland would change its system if it experienced its 'own' Kato Air incident.

5.5.2 "Of exceptions for small airports/aircraft"

A case that further exemplifies the stance taken by the CAA toward the implementation of security regulations in Norway was the case called "Of exceptions for small airports/aircraft" by the Norwegian authorities. The aim of this case that developed between the MTC and the CAA, starting in 2008, was to develop a common standpoint regarding an EU regulatory proposition, the (EF) No. 1254/2009.

In short, the setting for this case was that in the transitional phases between the first 'mother'[49] Regulation 2320/2002 and the new mother regulation 300/2008 (see Chapter 2 for an elaboration of the regulations), the EU AVSEC Committee sent out a regulation proposal to member countries (Norway included), asking them to take a stand toward the regulation No 1254/2009 (pertinent to the 300/2008). This regulation was "setting the criteria to allow Member States to derogate from the common basic standards on civil aviation security and to adopt alternative security measures" (Spesialutvalg-Transport, 2010, p. 1). The working group 'Spesialutvalg Transport' wrote in their assessment that:

> The proposition of an exception for small aircraft/airports is meant to give the member countries a *room for action* to decide "within one's own house", i.e., that Norwegian authorities would be able to decide the necessary security measures on the small aircraft/airports that are included in the proposal.
>
> (Spesialutvalg-Transport, 2009b, p. 2 [My translation])

[49] The word 'mother' is used by the informants as a way to describe the main Regulation 2320/2002 to separate between the main regulation and all the small additional regulations that fall under it.

This proposal, then, opened up a possibility for national autonomy on how security measures were to be handled by the small airports within the new Regulation 300/2008. The proposal was sent out before the new regulation was implemented (which in Europe was in 2008 and in Norway 2010), and it was sent out to get input from the member countries in advance of the implementation.

The first of four discussion papers establishes a dialogue based on aircraft weight and the importance this should have as a unit for delineation. One of the main remarks made by the competent authority (not stated which one) opens up the possibility for delineating between the small airports and the larger airports:

> Avinor has established a security regime where all airports are comprised by the same security regulation. If the weight limit were 20.000 kg, all 'Short Take-Off and Landing' airports [regional airports] would, according to the CAA, be under that limit.
>
> (Spesialutvalg-Transport, 2009a, p. 2 [My translation])

This meant that if the Norwegian authorities were interested in achieving an exception from the security regulation for the small airports, they needed to propose that the EU increase the weight limit to 20.000 kg. The original proposition from the EU suggested that the limit was to be set at 10.000 kg or aircraft with less than 20 seats. The CAA's response was to suggest lowering the limit even further so that no commercial aircraft fell in under the limit. They also suggested abandoning the weight limit altogether and instead separate between whether operations were open to the public or not. The reason they gave for not wanting any possibility to adapt local regulations for regional airports was the security-as-service aspect:

> The CAA's statement in relation to the first proposal from the EU-Commission was that the weight limit should be 5.700 kg. The reason given for this was that the CAA meant that a passenger who has purchased an airfare has the same demand of high security – regardless of type of aircraft, size or number of seats. The CAA would, therefore, rather separate between operations open to the public and those that are not.
>
> (Spesialutvalg-Transport, 2010, p. 2 [My translation])

This meant that the possibilities this proposition provided, the CAA's response clearly stated that they cautioned against having an exception for the

regional airports. They could have proposed raising the weight limit to 20.000 kg., thus opening up for an alternative implementation like the Icelandic arrangement. Instead, they suggested lowering the limit to 5.700 kg or delineating between public and non-public operations. The final document in this case was published on the 13th of January, 2012, stating that the final decision of the EU in this matter landed on operating with a weight limit of 15.000 kg (Spesialutvalg-Transport, 2012). This was too low for most of the aircraft operating the regional Norwegian airports; therefore, an alternative system for regional airports in Norway became less than likely.

As can be derived from this case, from the Norwegian authorities' side, represented by the CAA, there did not seem to be any wish to change the already implemented system of 100% security on the small, regional airports. Instead there can be seen a clear stance to uphold and maintain the already instated system.

5.5.3 Toward a more risk based regulation?

As indicated above, at the time the interviews were conducted, a new mother regulation was on the verge of being implemented in the EU. The new regulation, 300/2008, was on the verge of replacing the entire Regulation 2320/2002, and it entered into force in the EU on the 29th of April, 2008. Norway had an interim agreement stating that Regulation 300/2008 was to be implemented no later than the 29th of April, 2010, or two years later. In this chapter we have seen that Regulation 2320/2002 was perceived by the main actors in the Norwegian civil aviation system as excessively secretive and prescriptive. The objective of Regulation 300/2008 was to moderate this and become less secretive and less prescriptive, thus opening things up for more risk-based approaches. As stated in the published version of Regulation 300/2008 in the Official Journal, the intention was that "this Regulation should lay down the basic principles of what has to be done in order to safeguard civil aviation against acts of unlawful interference without going into the technical and procedural details of how they are to be implemented" (European Parliament & European Council, 2008, p. L97/72). The new Regulation 300 also aimed at being more risk-based. The Chief of Security at Avinor's Central Offices reflected on the transition to more risk-based approaches to security, which would entail more differentiation between places and airports, including basing measures on assessments:

> If you look at the cost and combine it with probability, risk and threat assessments, it might lead to different regulations at different places. At least we think so, especially because there is already differentiation within the regulation today. For instance, if you have an airport with less than 40 issued ID cards, you can deviate from some parts of the regulation. But then again, the nuances are so small that you do not really save much. But there are discussions in the Commission on whether there should be an alternative regulation for small airports, so we hear that there is some movement in that area. We are very excited to see what is going to happen.
>
> (CoS, Avinor Central Office)

He was not convinced, however, that there would be any regulatory relief in the near future:

> But for now the regulation is very prescriptive. The only way to get 29 member countries in the EU to act fairly uniformly is to explain in micro detail how they should perform a service or duty. For myself, I usually compare the regulatory system on security to Norwegian regulatory legislation in the mid-1960s. It is very detailed and very casuistic. While we in Norway up until today have been very accustomed to framework legislation and functional descriptions, here we go down to a very detailed level. However, it is not only Norway who thinks that there should be a more risk-based approach to this. But in light of the special events aviation has been subjected to, it has been necessary to act rapidly and to make some special moves regarding regulation. So we just have to see if things get any better. We are a little sceptical to whether... Let us just say that we do not necessarily see any signs on the demands being lowered. So we think that maybe technology will play a part in helping us to move forward. Maybe technology can provide a more lenient and simple future within the security field. Time will show.
>
> (CoS, Avinor Central Office)

As we see through the new mother Regulation 300/2008, there is a clear direction, or ambition, of the EU to moderate the degree of micromanagement of the regulatees. The direction of the EU is clearly to move toward more risk-based approaches, which presupposes less prescription. It is also a clear preference of the main agents within the civil aviation system to become more risk-based. However, there seems to be some differences in what this 'risk-

based-ness' should entail. According to Avinor, through the statements from the Chief of Security, and through the signals from the EU, both through the new regulation and the proposal to differentiate between smaller and larger airports, the aim seems to be to base more of the regulation on risk assessments. The CAA did not seem to concur with this differentiation, at least not in the state the EU proposed it.

In this last part of the chapter, I will summarise what has been described in this chapter in relation to the two empirical questions posed in the introduction of this chapter.

5.6 Concluding summary

The first empirical question aimed to create an account of the post-9/11 transition of the regulatory system from a Norwegian perspective: how it progressed, how the Norwegian authorities positioned themselves in relation to this transition and, closely linked to this, the strategy chosen for the Norwegian implementation. The second empirical question aimed to create a description of how the main actors in the Norwegian civil aviation system perceived the new regulatory system and its consequences. I have divided this summary part into two sections, following the two empirical questions.

5.6.1 Transforming the security regulation

Although the regulatory transition for aviation security that took place in Europe after 9/11 was initiated and organised by and for the European Union, Norway became involved and juxtaposed with the other EU member countries due to its European Free Trade Association country (EFTA) membership. Because the European Economic Area (EEA) processes regarding regulatory implementation were much more time consuming than the EU processes, Norway could not implement the new security regulation simultaneously with the EU. In order to stay on the inside of the EU civil aviation security system and avoid designation as a third country, Norwegian authorities compensated for the time lapse between EU implementation and EEA processes by amending the national regulation to hold the same level as the EU, while applying for an interim agreement for the regional airports. This interim agreement, however, while not permanent, can be considered to facilitate the transitional phase so that the Norwegian airports had time to reconstruct

airports and train personnel to accommodate the demands of the EU regulation. The interim agreement cannot, therefore, be considered as an application for more lenient regulatory measures at the small, regional airports.

The Kato Air incident hurried the Norwegian implementation of the EU security regulation and, thus, transcended the interim agreement Norway had with the EU. The result was that 100% security screening was instated on the regional airports a mere half-year prior to its original implementation date. As already stated, the EU security regulation was planned to be implemented eventually at the regional airports. Therefore, one can say that the reactions taken after the incident were only following what had already been decided. However, the handling of the Kato Air incident can also be seen as signifying the Norwegian authorities' strategy toward security regulation. This becomes clearer when we compare the Norwegian and Icelandic implementations.

If we begin by looking at the Icelandic strategy toward the EU regulation, we see another kind of discourse. Iceland was also obligated by the EEA agreement, but the Icelandic Authorities chose to apply for a total exemption for their national aviation system. The discussions in Iceland had been how they were to handle the new regulatory system imposed on them by the EU while finding alternative solutions that the EU could accept without them having to implement 100% security on all airports. Their solution was to completely separate the national and international systems by having two airports connected to their capital, Reykjavik. Since these were physically distant from each other (approximately 30 km), it was easy to separate the domestic and international aviation systems. At the international airport, the EU regulation was fully implemented, while at the national airport, security measures were implemented on the basis of risk assessments performed by the national police. This alternative provided the Icelandic civil aviation system with the possibility of implementing what they found relevant, based on the national risk assessments. Not only was this a more economical way to operate the national aviation system, but the Icelandic Head of Security at the Civil Aviation Administration (CAA) explained that it was valuable to them to maintain this self-determination over their own national system. This viewpoint was emphasised even to the extent that it was asserted that if a similar attack as the Kato Air incident would happen in Iceland, they would most likely continue with the solution they had already implemented.

Seen in the light of the Icelandic case, the Norwegian implementation strategy was to implement all of the EU regulation. The interim agreement was a 'via media' for the Norwegian authorities in being able to buy time to establish a system that met the EU regulatory demands while not being excluded from the European One-Stop Security system. As described by the Vice President of the Ministry of Transport and Communications (MTC), being part of the European civil aviation system was a clear strategy by the Norwegian authorities. To achieve that, the practiced strategy was to be involved in the European Commission, to lobby and be visible and to demonstrate cooperative willingness through amending national regulations while EEA regulations were pending. The European Commission rewarded Norway by giving extra time for implementation without giving Norway a 'Third Country' status.

Iceland had taken a clear stance in relation to the implementation of EU regulation, which was to follow the EU regulation for security in all international aviation activities but simultaneously to keep the autonomy of its national aviation activities. This made it possible to combine the prescriptive EU regulation with a risk-based system for the national aviation system. Since Norway chose to implement the complete EU system at all airports, the result was that all Norwegian airports were subjected to the same prescriptive system. In relation to the implemented security regulation at Norwegian airports, the CAA stated that they were pleased with the current state of the system. Their stance was also further supported by the case 'Of exceptions for small airport/aircraft' ((EF) No 1254/2009), whereby their recommendation was to decline the possibility for differentiated implementation between large and regional Norwegian airports.

In the interview with the CAA, the Kato Air incident was also presented as a justification of the need for security measures at the regional airports. Seen in relation to both the Icelandic system for aviation security and the Blenheim hijacking case, this suggests that alternative strategies for handling regulatory transition and intentional incidents can be found that do not necessarily fall under the kind of risks that Regulation 2320/2002 was constructed to avoid. What can be deduced from this is that the strategy chosen by the Norwegian authorities led to an implementation that is founded on purely prescriptive regulations, while the strategy of Iceland (and New Zealand) opens up possibilities for a combination between prescriptive and risk-based systems.

5.6.2 Consequences and perceptions of the transformation

Based on the interviews with the main actors in the Norwegian civil aviation system, three words have been recurrently applied to describe the security regulation and its implementation: secrecy, rapidity and reactivity[50]. These three words will guide the descriptions of the consequences the transition has had for the main actors in the civil aviation system.

5.6.2.1 Secrecy

The regulatory system that was implemented after 9/11 had a much larger degree of secrecy than its predecessor, a level of secrecy that some of the interviewees stated was problematic and/or inexpedient. For instance, the MTC Vice President stated that, to an extent, she found this practice to 'oppose her sense of justice', because since most of the regulations were undisclosed (secret), this also ruled out the possibility of having hearings where all affected parties could be part of the process. She compared this to how they handled issues that *were* disclosed (open), where they held large hearings and the input they received was considered to be very important. The increase of the secrecy level had, therefore, resulted in an exclusion of a larger portion of affected agents.

5.6.2.2 Rapidity

The rapid way security regulations were implemented had consequences as well. Because of the time span between the event and the regulatory implementation, this ruled out the possibility of performing thorough assessments prior to implementing them. Avinor's CEO explained how safety regulations had worked as a model for the development of the security regulation. However, in safety regulations, time has been considered to be important for performing sufficient assessments prior to an implementation, particularly for documenting the effectiveness of procedures before an

[50] The three describing words were first used by an interviewee from the legal department at the Civil Aviation Authority in one of the preliminary interviews in 2008. The concepts have been useful in delineating properties of the 2320 regulation as informants and interviewees have described the regulation through the same or similar concepts. I have therefore used these concepts throughout the thesis in relation to main changes of the security regulation.

eventual implementation. The same procedures have not been followed with the security regulations. As the CEO explained, there were good reasons for why the implementation happened so rapidly within the security arena. The time-consuming processes of documenting effects prior to implementation would not have been satisfactory after 9/11, since the attacks had demonstrated an urgent need for better security measures. However, the consequence of this was that security measures were not subjected to the same profound analysis and assessments because they were implemented too rapidly. Based on this, it is possible to say that, while the safety regulation process has been used as a model for regulatory development within security, there has only been a partial transfer of the principles for regulatory development from the safety to the security realm.

Additionally, and linked to the previous section (secrecy), the rapid way security regulations were implemented offered less opportunity to create hearings prior to the finalisation of regulations. As described by the interviewees, when regulations were finalised and implemented, there was minimal possibility to change anything, which implies that influencing had to be done prior to a finalisation. In short, both the heightened level of secrecy and the rapid way of development and implementation resulted in less opportunity for the affected actors and agents to be included and to exert influence before the regulations were finalised.

5.6.2.3 Reactivity

Aviation security is highly event-based, and when one examines the major regulatory developments, there has usually been an antecedent event. The Regulation 2320/2002 was developed and implemented after 9/11; the liquid ban was instated after the Christmas-day bomber; and even in Norway (although it was eventually coming), the full EU regulation was implemented within 48 hours after the Kato Air incident. This reactive way of regulatory development and implementation was, according to the Avinor CEO, also taken from safety regulation. Within safety and the traditional field of accident prevention, the methods for regulatory development have evolved over decades and build on hindsight. Incidents are investigated, followed by the implementation of new procedural regulations and technological solutions. This process, however, is not rapidly exercised, since the different steps take time, especially when the aim is to certify that what has been implemented is

effective and appropriate. Although it is a time-consuming process, the CEO underscored that the main benefit of this practice is that it ensures and documents that the implemented measures are in fact improving procedures.

In the next chapter, we move from the authority level of the civil aviation system to the airport level, where regulations are implemented and handled in practice.

6 SECURITY REGULATION AT THE AIRPORT: ONE SIZE FITS ALL

6.1 Introduction

The previous chapter's aim was to describe the environment in which EU Regulation 2320/2002 was developed and implemented, including its perceived consequences. The interview data were mainly gathered at the administrative level of the Norwegian civil aviation system. This chapter aims to delve deeper into the implementation at the airports: what it was like to work with, and according to the security regulation on both leader and employee level. The last two empirical questions presented in the Introduction have guided this objective:

3. What challenges caused by the security regulations were described by people working at the selected airports?
4. What are the consequences attached to implementing a common security regulation, regardless of airport size?

Asking these questions makes it possible to investigate how the work of different actors at the airports (both regulation enforcers and the enforced) was affected by the regulations. By connecting this to the variable of different airport size, it is possible to reveal some consequences of implementing a common, prescriptive security regulation on all Norwegian airports, regardless of their size. This chapter is, therefore, oriented around the more practical aspects of operating with and according to the security regulations at the airports. The data presented in this chapter were gathered through empirical fieldwork that applied participant observation, unstructured and semi-structured interviewing methods.

6.1.1 Chapter construction and guide

This chapter is largely based upon the empirical fieldworks conducted at the three Norwegian airports. I have chosen to present the data from these fieldworks in a single chapter to be able to juxtapose them under a 'single

roof' and to discuss them together in the concluding summary of the chapter. I have also included the issue of airline crews in this chapter, as this was a group highly affected by the security regulation, although not pertaining to any singular airport. Since including all these elements entails a comprehensive quantity of data, I will here describe how this chapter is constructed and how the different parts are delineated.

I have chosen to present data from each airport as a separate section. As elaborated in Chapter 4, I selected four companies representing three work groups (airport administration, security and handling) where I conducted my fieldwork. These were the groups I found to be most in contact with, and affected by, the security regulation, which was an important criterion for including them in my study. At Sola Airport, I have focused on the main challenges for each group (both on leader and employee level), while at Fjellvik Airport, this delineation between the groups was not very suitable, since they were few employees and all worked quite intertwined. At OSL, I started out with the same group delineation as I had done at Sola. While this worked well for the most part, some adaptations were needed (see Chapter 4 for an elaboration). Notwithstanding, it is appropriate to say that en masse, the same design was applied at all airports, which included fieldwork among the same companies at each airport.

I spent more time at Sola than any of the other airports[51]. The fieldwork I conducted at Sola can be considered as the 'main' fieldwork, while the two fieldworks at OSL and Fjellvik were more supplementary. Sola, therefore, worked as a point of departure for comparing the differences between the airports in this study, and it is, therefore, also more extensively elaborated than the other two fieldworks. In addition, in the section dedicated to the Sola fieldwork, I have included a case that affected all the three employee groups. I have called this 'the Barracks case', which refers to the barracks placed between the security zones (higher and lower) at airside at Sola Airport. I include this case to depict the kind of adaptations that airports that were not constructed for the 2320/2002 regulation have had to make and the consequences of these adaptations for the airport employees. The barracks solution was also applied at other Norwegian airports, which makes it

[51] See Chapter 4, 'Methodology', for an elaboration of the apportioning of time between the airports and the construction of the case.

interesting beyond the setting of a single airport, because it can be considered as an examination of a commonly applied regulatory implementation in a real-life setting.

In addition to the three sections dedicated to the three airports, I have included a section called 'the crew perspective', which describes the main challenges, obstacles and questions seen primarily from the perspective of airline pilots. This part is based on interviews with representatives from the pilot/crew interest organisations and media coverage of airport conflicts between pilots and airport security staff.

The chapter concludes with a summary that intends to draw up some main lines of the presented data in relation to the two empirical questions posed in the introduction. But first, we move over to the context of the airports, where we begin with the main fieldwork at Stavanger Airport, Sola.

6.2 Sola Airport

In Avinor's delineation of airport sizes presented in Chapter 2, the main categories of Norwegian airports were regional, medium and large airports. This delineation was based on annual passenger numbers and number of flights. Sola represented the large airport category and had approximately a passenger flow of 3,4 million in 2009, including charter, transfer and transit (Avinor, 2013a), making it the third busiest airport in Norway. Although Sola was one of the largest airports, it was not constructed for a regulation like the 2320/2002. In this first section of the chapter, I intend to depict how people, both leaders and employees, worked with, according to, and in relation to the security regulation at Sola Airport, thus revealing the challenges the security regulation caused at the airport level of implementation. I begin by describing how the transitional phases unfolded at the airport after 9/11, based on accounts from the Sola Avinor Department and the security company, Securitas.

6.2.1 The transition

A major regulatory change like the one that occurred after 9/11 will necessarily affect how the airport companies operate. I organised two initial interviews with, respectively, Avinor and Securitas at Sola in which the transition period was the main theme. The intention of these interviews was

to shed light on the differences between operating at an airport before and after 9/11. The reason for focusing on these two groups was that they had to implement the new Regulation 2320/2002 into the airport: Avinor through administering it and Securitas through training and recruiting personnel to meet the new demands in the regulation. The information from these two interviews is presented in the following two sub-sections.

6.2.1.1 Avinor

Avinor held the administrative positions as the airport operator at each individual airport (owned by Avinor). Sola Airport, as a representative of the large airports, had dedicated full time positions working with security issues. Although some people on the team had more tasks than just security (as safety issues), three people worked directly with security. Since safety and security issues often coincided and overlapped each other at the airport, it was impractical to work with these areas separately. This overlap was due to the airport's size, because the fewer flights and, hence, employees an airport had, the more various work tasks each employee would be assigned.

During the initial meetings with the Chief of Security (CoS) at Sola, he explained how the changes had occurred in security and how it had become organised after 9/11. The CoS had worked for 27 years in a range of positions at the airport. It was first in 2004 that he began working directly with security, since it had not been a delineated field prior to that. He recalled getting the order from the Civil Aviation Authority (CAA) when they, at Sola, had been asked to write the local security regulation for the airport. This task was a direct demand from the new 2320/2002 regulation. They had been given three weeks to accomplish this, and the CoS and his colleagues had almost locked themselves into their offices during those three weeks to complete it. This resulted in them being the first airport to send the local regulation over to the CAA, which again resulted in them also being audited as the first ones. The CoS described the first auditing as a 'slaughtering', and the main reason for this was the level of details they were supposed to have included in the regulation. This was a quite different approach than what they were used to, and as the CoS explained, "It just goes to show how little we understood at the time about what was expected of us". The main critique they received from the CAA revolved around the lack of detailed descriptions of procedures, where details should have been included about how and where,

how often and by whom the single procedure was performed. This, then, demonstrated the entirely different way procedures were to be described, with minute details of how they should be executed. It marked a new way of thinking about security. In this transition the difference between the fields of safety and security became increasingly clear. From being fields that were previously more similar to each other, they now became increasingly distinct and clearly separate.

The Chief of Security exemplified this by telling about a case regarding a safety issue to show how the difference between safety and security materialised.

The Runway Strip Case

Around runways there are demands to have a safety area, a so-called 'runway strip'. The runway strip is constructed to protect aircraft that end up outside the runway for various reasons. During the early 2000s, a new national regulation was implemented (Luftfartstilsynet, 2006), which resulted in large adjustments on several Norwegian airports, with overall conjoined costs for Avinor. In agreement with the CAA, and in cooperation with other safety organisations, such as Det Norske Veritas (DNV), a risk management consulting company, risk analysis tools were developed to assess risks connected to the deviations. The CAA performed their own assessment. On the basis of these assessments, the CAA provided instructional material in the 'Regulation on Large Airport Design' (BSL E 3-2) attached to an alternative design of safety areas (BSL E 3-2, attachment 1 A 2.1.2) as a cost-reducing possibility. A further outcome of the assessments was the risk ranking of Avinor airports, so the work of adjusting the airports according to the new runway-strip regulation could start where the possible safety gain was greatest. This approach was applied instead of the more common strategy of attaching improvements to technical operative approval due dates.

The main point for the CoS was to illustrate, through this case, how the CAA demonstrated a will to consider compensating measures in safety regulations, even describing these in the regulation's instructional material. Thus, the signal from the CAA was that deviations could be accepted if compensating measures were implemented instead.

The CoS explained that this would never have happened if it was a security question. Within the security environment, everything was so detailed and

strict that there was no room to apply anything that was more adapted, suitable and/or economically beneficial to the actual airport. This was also considered to be a problem, in that they had no power to reallocate funding where they felt it was needed. For instance, the security department at Sola would have liked to use money to perform background checks of their employees more often than the CAA demanded. The reason for this was that on several occasions in Norway, some airport employees (security guards mainly) had been convicted of felonies yet they continued working at the airports during the time in between the obligatory background checks. This was possible because the CAA only demanded that personnel be background checked every five years. This left open a large window for doing criminal offenses between the background checks, which would normally disqualify people from working with security. This example given by the CoS demonstrated how the security and safety regulation had become more differentiated after 9/11. Safety regulations had maintained possibilities for adaptation, while security had become more an issue focused on fulfilling the predefined requirements, with little possibility to apply resources where the single airport found it expedient and appropriate. From being treated in a more or less similar way prior to 9/11, security began to move away from safety into a new direction of less autonomy and more prescribed routines after 9/11. This was further elaborated by the new and expanded local regulation, as described by the CoS, especially regarding the level of prescriptiveness that ensured the airports had less autonomy when handling security measures.

6.2.1.2 Securitas

As described in Chapter 2, 'Securitas Transport Aviation Security' was a subdivision of the transnational Securitas Company. Securitas had already been involved in airport security prior to 9/11, but on a much smaller scale. After 9/11, Securitas' airport security division grew rapidly, because they possessed the needed competence of security screening at airports. In an industry that multiplied itself within hours after the attacks, it was natural for the aviation sector to utilise Securitas' competence when implementing the 100% security screening at the airports. Securitas had, thus, the possibility to grow together with the development of aviation security, leaving them in a fortunate position to expand as a company. As Norway was steadily

implementing security screenings after 9/11, the exemption for regional airports, as described previously, came to an abrupt end with the Kato Air incident. Then, Securitas had to send out their already trained personnel to all other airports to train them and to participate in implementing full security screening within the 48 hours that was provided. Although not contracted for Norway's largest airport, OSL Gardermoen (the only airport that used another security company), Securitas was also hired to train and certify security guards there.

At the beginning of my fieldwork at Sola in 2008, a new 5-year contract had just been signed between Avinor and Securitas to provide security to all Avinor airports (except OSL). Securitas had won the bid for all 45 Avinor airports.

In the first interview with the Securitas Leader and Second Leader at Sola, we discussed the transitional period, and they elaborated how their work had been influenced by the transition. I was actually fortunate to be able to ask questions about the transitional phase, since most of those who had worked there during the transition were no longer employed at Sola. This was mainly for two reasons; the first was that 9/11 initiated an enormous increase in the security workforce. Consequently, a large percentage of the workforce became employed after 9/11 and, hence, had not been part of the transition. Secondly, the security company had experienced a large turnover in their workforce, which meant that employees were continuously shifting.

However, it was clear that there had also been a large changeover for Securitas. Prior to 9/11, there had also been security screenings but only on 10% of the passengers. The Securitas Leader at Sola emphasised that it became almost easier to do security screenings after 9/11 because it became so evident to the passengers why they were doing them, bearing 9/11 freshly in mind. The fact that everything was prohibited right after the 9/11 attacks seemed to be easily accepted by the passengers and, hence, the control was easier for the security guards to accomplish. A large change for the employees, however, had been the employee security control that had started in 2004. It had been difficult to get the employees to accept this control, since all airport personnel had to have a security clearance, and thus, perceived it to be unnecessary to go though more screening. The security guards had to withstand much negative pressure, since they were the ones who had to perform the security check on the other employees. This had improved,

according to the Securitas Leader, and it seemed as if the employees had become more accustomed to it. While this may have been right, the employee security control was still listed as the least popular place to work by most of the security guards I was in contact with during my fieldwork.

As a company and as the main provider of security services, Securitas, then, had some advantages in the transitional period, because they had already been providing security services at the airports prior to 9/11 (although not being the sole provider). They were therefore able to grow with the transition by being present while everything happened and steadily increased both the employees and airports they provided services to. Thus, the transition Securitas had gone through was different to Avinor's transition, since their roles at the airport were very different. One was the airport operator (Avinor), and the other (Securitas) was a company contracted to provide a service to the operator. The main challenge for Avinor had been the scope and comprehensiveness of meeting the regulatory demands in the very rigid way it was given to them, while Securitas had an opportunity to increase and grow together with the enormous increase in the demand for security guards. However, to be in the front line enforcing the regulation had also been a tough job at times, and when one employee group was assigned the task to control all others, a potential area of tension developed. The Securitas Leaders described this tension in relation to the introduction of the employee security control, but this was also a common theme in other areas between the security guards and other employee groups. This will be further described in later parts of this chapter.

We now move from the transitional phases over to the more company-specific issues related to the security regulation. In the interviews with the Leaders (both prior to and after each fieldwork), they described some of the main challenges and areas of tension caused by the way the security regulation was enforced and implemented. Avinor's role as an airport operator implied that they worked more in a facilitating and supervisory function at the airport. They were responsible to the Civil Aviation Authority for the regulatory implementation and ensuring that procedures were performed satisfactorily according to the regulation. The contracting companies, on the other hand, were 'end-users' of the regulation and were, therefore, in a different position than Avinor's. The Leaders' descriptions of challenges presented in the following section provide a complimentary contribution and a

backdrop to the employees' descriptions, which will be presented later in the chapter.

6.2.2 Challenges: Avinor, Securitas and handling companies

This part describes some of the main challenges in regards to the security regulation, based on the interviews of the Leaders of the different companies. Due to the different relationship the companies had with the security regulation, they described different challenges. However, there were also overlapping concerns. I begin with Avinor, continue with Securitas and finish with the handling companies.

6.2.2.1 Avinor

In the interviews with the Chief of Security (CoS) at Avinor, Sola, it became clear that he had put a lot of thought into the various challenges and obstacles created by the security system. One of his major concerns was that he wanted the airport employees to better understand what they were doing. He knew that it was sometimes difficult for the employees to make sense of the regulatory procedures, and he received many complaints from both employees and leaders of other companies because of this. The CoS used an example to elaborate this where the CAA had sent out a message to the airports about a certain person whom the CoS did not know but who was allowed to bring his walking sticks with him in his hand luggage (these were prohibited items according to the regulation). This meant that when this person came to the security control, he could deliver a permission note and be let through. All the security guards had to remember this so he could be easily let through. This did not make much sense to the security guards. The CoS also thought this was peculiar, and he explained that they had not received an explanation of the reason for this special treatment. In a regulation where everybody was to be treated equally and to undergo the same controls, this special treatment of a single person seemed odd. Since situations like this appeared without any explanation, they ended up confirming the employees' opinion about the regulations being inconsistent. For the CoS, this caused a dilemma for him, because in these situations he agreed with the employees.

However, the CoS also believed that he should not and could not express this to the employees, because he thought that by expressing his own

frustration to them, it would discourage them even more. He also understood that these things influenced employee motivation.

> The CAA asks us in Avinor things like 'how do you motivate the employees to take responsibility for security at the airport?'… And in my opinion, to motivate employees to do this [taking responsibility] at the same time as they're stripped of responsibility through a regulation that is so rich in details is a large antagonism [motsetning]. It's pulling in two different directions.
>
> (Chief of Security, Sola)

Although the CoS clearly was critical of some points about the system, he was simultaneously clear about the role he felt that people's attitudes also played. He thought that how one related to the regulation was of great importance. For example, he explained how a leader for one of the operating companies at the airport had claimed that security easily became an HSE issue (Health, Safety and Environment) because the security control took so much of the employees' time and that it caused people to stress and hurry other things because of this.

> This, to me, is a typical example of attitude. There isn't done anything from your side to facilitate the situation. Take for instance… I'm commuting to work, and now they're reconstructing the road again and I have to drive 3 kilometres extra each way, because they have closed part of the road that I usually use. Ok, so what's the result of this? Well, I leave a little earlier from home! I don't leave my house at the same time that I used to every morning, getting surprised every day that I'm getting late! […] This way it's also a question of how one chooses to relate to security. Like if you act in order to underline how difficult it is.
>
> (Chief of Security, Sola)

He also gave another example of the kind of negative attitude he thought was present, when, at an aviation conference held a few weeks prior to our conversation, a leading person in Norwegian aviation opened his speech by saying that he 'hoped everybody had had a nice travel *despite* the security control'. The CoS thought that this demonstrated the prevailing attitude to security. "This is why a change of attitude may be needed".

For the CoS, then, although he saw a kind of negative attitude toward security among employees, he also recognised that the way the regulations were applied in practice created problems for them. To the CoS it was a

problem that procedures seemed inconsistent and, at times, meaningless to the employees, and he found it difficult to find ways to motivate them. We will return to these questions later in the chapter, especially in the barracks case.

6.2.2.2 Securitas

In the preliminary interview with Securitas, the Leader explained that there was a much larger portion of situational assessments than one could expect in a system that was as detailed and prescriptive as the security regulation. She described that there was still room for interpretation, although there were instructions for almost any conceivable situation. For instance, the regulation stated that passengers could not bring knives or similar items longer than 6 cm through the security control. However, the leader then explained that there would always be differences in how passengers were handled.

> Let us say a passenger is perceived to be drunk or unstable and he carries with him a 6 cm knife. Then consider a 90 year old lady carrying with her a pair of handicraft scissors. You would not hesitate to remove the 6 cm knife from the drunk, unstable man, but maybe not from the old lady. The regulation states that you should not bring items that are not needed on the journey on board the plane, so in this sense there is a legal authority to take people's things away, even though it is a borderline case.
>
> (Leader of Securitas, Sola)

In other words, even though the regulation was thoroughly detailed, situational assessments were applied. What followed from this, as we shall see later, was that different perceptions about how the regulation was to be understood could develop, because there were room for situational assessments; some would choose to follow the rules very strictly, while others could choose to apply the situational assessments possibility more.

Since the job as a security guard involved front line work with both passengers and other employees, being a security guard could be challenging. I therefore asked the Securitas Leaders how they handled different challenges the employees faced in their jobs. The leader explained that most of the problems were handled by the Shift Leader on site. Each shift had one leader who was on the floor in the security control area all the time. The Shift Leader was supposed to note all recurrent problems and report them to one of the Leaders. They, in turn, were supposed to bring these reports to Avinor's

Security Department at the airport; however, this was where things were described as becoming more cumbersome. Most of the decisions in cases of doubt were made at the airport. For instance, this was the case after the implementation of the liquid ban, when items such as eggs and goldfish in plastic bags had to be determined as being prohibited or not. Performance challenges were difficult to amend since the possibility of changing how procedures were performed or adapting the routines in any way, was low. This was a direct result of the way regulations were developed and implemented, whereby the regulation that had arrived at the airport was extremely hard to change. Consequently, the Securitas Leaders did not consider it worthwhile to go through a process of suggesting procedural alternatives that would most likely lead to nothing. Thus, problems that arose in relation to practices and routines were set aside, since it was considered a low yield use of time and resources.

To sum up the main arguments from the Securitas Leaders, they did not perceive that Securitas, as a contracting company, was in a position to influence the practical implementation of the regulations. The lack of any possibility to adapt the regulation in context and/or to influence it through reporting back on ill-fitting routines gave them the impression that they had little or no influence regarding the practical application of the regulation. While there was some room for interpretation when it came to the smaller details, this seemed to be more a point of distress than a possibility to make things work more seamlessly. This was also reflected in the security control area, where the possibility to interpret, which we will see later on, seemed to cause conflict and ambivalent procedures, because the assessments became individual-dependent, to some extent.

Next we will deal with the handling companies' Leaders and their accounts of the challenges they experienced because of the regulation.

6.2.2.3 Handling companies

During the initial interview with the first handling company, it became evident that operating a handling company involved demands from many angles. The handling companies were contracted by the airlines to handle their on-ground services[52]. 'Quality' was an essential word in relation to this. The

[52] As described more thoroughly in Chapter 2, 'Background and Context'.

airlines had quality demands, also called an SLA, which determined the turnaround-time (unloading/reloading the aircraft with passengers and cargo), and high quality was also demanded on cargo and luggage procedures to ensure a low number of errors. In order to achieve this satisfactorily, there had to be a focus on quality at all times in the handling companies' procedures. On top of these requirements came the demands in the security regulation. One of the handling company Leaders expressed, "When you put security on top of an already strained time schedule, this is sometimes hard to do in practice". What the Leaders seemed to be generally concerned about was that the time strain could lead to a loss of focus on other important issues, such as safety-related issues. The major concern was that this time strain could lead to cutting corners or other 'quick solutions' that could again lead to injuries and accidents. Since there were no possibilities to do 'quick fixes' in relation to security, this would most likely be done on the safety-related issues.

What the Leaders were very clear about was that security was sometimes a burden to the employees and was one of the main reasons for the heightened stress levels among them. The barracks[53] was a typical example of a straining factor on the employees. As one of the Leaders elaborated, "The barracks are a large stress factor to the employees. […] Very much time is spent on checking the employees. This is a regular complaint from our employees". One of the other Leaders added another example.

> For instance, you have the increased number of hand luggage after the security regulation was implemented. There hasn't been given a larger time window because of this. Everything is the same as before, except that there is more work to do. All companies have a so-called SLA, which means a service level that should be met. It's a combination of quality and time limits on operations. This isn't so easily done when people are stressed.
>
> (Leader, Handling Company)

A recurring theme was the difficulty of motivating the employees to perform procedures according to the security regulation that did not make

[53] The barracks were check points at the airside, manned by security guards who controlled all entering into the most secured area of the airport. It is further elaborated and discussed below.

sense to them. One of the Leaders elaborated on how this conflicted with his opinion of what a leader should be.

> I think it is the leaders' responsibility to motivate the employees to do what they are supposed to according to the legislation, but when you [the employees] see obvious things that don't make sense, you, as a leader lose credibility with the employees. When they ask you why something is as it is, you don't really have an answer. […] Demands just arrive and it isn't like the background for it or the assessment behind it comes together with it. This makes it hard to convey the meaning behind it to the employees.
>
> (Leader, Handling Company)

One of the main reasons why procedures sometimes seemed to lack meaning was when employees encountered what they saw as inconsistencies in the system. The barracks were brought up several times in relation to inconsistencies and will, therefore, be discussed more thoroughly below, but there were also other examples. One of the Leaders exemplified this through the handling of the ID cards. Avinor was responsible for issuing ID cards at the airport. All airport employees had to wear their ID cards visibly at all times while working at the airport, and employees could not get through the employee security control, and thus not get into the work areas, without it. It held, then, a great deal of importance and Avinor, being responsible for these cards, always stressed them as something that should be guarded well. The Leader felt that this exemplified the inconsistency, because he saw it as problematic that everybody took their card home. He found it difficult to believe that the cards really were that important when it would be easy for these cards to get lost thus, something that did occur.

> I think it would be more secure to leave these cards at the airport after your shift has ended and reclaim them when you go on duty again. Then you would have full control over all the cards at all times. [...] to me this would make things more secure.
>
> (Leader, Handling Company)

His main point was that since the ID cards received this very high attention and were given such importance, he did not find this compatible with people taking them out of the airport, where they could be lost. He thought this practice constituted a security risk. The inconsistency was that security

received such great attention, yet he thought that the handling of the cards was taken lightly.

To sum up the main points from the handling companies here: the conflicting goals between safety and security were exposed. This was mainly due to an already strained schedule caused by the demanded Service Level, or SLA, having security procedures added to it. The normal turnaround time for an aircraft was 20 minutes for a domestic flight. This meant that within these 20 minutes, the aircraft should be parked at the gate, passengers, luggage and cargo should be unloaded, possibly the aircraft would need refuelling, then the aircraft should be boarded again with passengers, luggage and cargo and the doors closed. It cost money for every minute that exceeded this time frame. This was part of the SLA as described by the Leaders, the service label they were supposed to fulfil. Adding security measures to this equation could at times create conflicting goals with the SLA and/or safety routines, and this was a concern for the handling companies' Leaders. They recognised that this pressure from different angles put a strain on their employees, and their concern was that focus could be lost on safety issues, since this was the only place shortcuts could be made.

The second main point was what the Leaders labelled inconsistencies. These were mainly issues in which security were given a lot of focus, but when it came to the actual accomplishment and implementation of certain routines, the Leaders did not see this importance mirrored in the procedures. We will get back to this issue later in the chapter, also.

So far I have focused on the contracting companies' Leaders. We now move the focus over to the employees of those companies who were working as security guards and ramp agents[54]. What was it like for them in practice to work with and operate according to the regulation? What challenges did the employees meet in their work caused by the security regulation, and how did they handle them? Motivation was an issue the Leaders accentuated, and I wanted to find out if motivational issues could be traced back to the practice of the regulation.

The next two sections present data from the employees in the security and handling companies. Here, the main aim is to create descriptions from their practical work day, tasks and procedures in order to see where the employees

[54] Handling personnel working at airside of the airport

met different challenges and how they worked with, and in relation to, those challenges.

6.2.3 Securitas: security control of passengers and employees

In this first section I present some of the main challenges of working in the security control area, as described by Securitas employees. I have chosen to present the accounts of three employees: two of them working as security guards and one who worked both as a security guard and as a Coordinator. The section concludes with a summary of the main findings from the security control.

I began my fieldwork at Securitas in the passenger security control[55]. The working day in the security control varied throughout the day; hence, the shifts also varied. The first shifts opened up the security control area at 04 AM. The contract between Avinor and Securitas at Sola stated how many security gates should be open at all times based on passenger flow calculations. This meant that during the day, from hour to hour, security gates were opened and closed according to the flow estimate. This formed the basis of the number of personnel present throughout the day. This stood in contrast, to the system at OSL, where the security gates were opened or closed according to the number of minutes people were lined up in queues. The system at OSL was an optional type of contract that focused on the passengers' waiting time and not on the actual number of security gates. Although it may be easier to meet a higher service standard and put less stress on the security guards in times of high pressure, it is also a more expensive way to organise the security control.

Each shift at Sola had a Shift Leader and a Coordinator. The Shift Leader was in charge of the shift in the security check and was the primary contact person for the security guards. The Shift Leader, for most part, worked with the security guards in the security control. The Coordinator had a dedicated office in the security control and had the responsibility to oversee all the different areas where the security guards worked during the day. This meant having contact with the different areas and solving problems that came up

[55] See Chapter 4, 'Methodology', for an overview of my fieldwork time distribution between the different areas Securitas were responsible for.

during the day. In addition, the Coordinator had to organise unforeseen things, such as supervising outside construction work.

6.2.3.1 Being in the front line

Securitas employees can be considered as the front line enforcers of the security regulation, because they enforce the regulatory procedures regarding passenger, employee and luggage screening. This also put them in a very exposed position, since they had to front the regulation and maintain and 'defend' it to the passengers, airline crew and employees, and receiving, to an extent, responsibility for how these activities were performed and/or implemented. The security guards handled problems differently and were either less or more influenced or affected by the challenges and pressures they were exposed to because of this front line work. In this following section, I present the accounts of three security guards to describe the work in the front line and what challenges this caused for the guards' work. Not all of the challenges were directly caused by the security regulation, and this will be illustrated in the text.

Difficult passengers and Leader support

The people working in the security control were very different and had different motivations for having such a job. Yvonne was in her early 20s and had been working for a few months in the security control. She explained that her reason for wanting to work as a security guard was that she considered working in a supermarket or similar environment to be 'boring'. She also explained that some of her friends seemed to feel sorry for her for having the job, since it was sometimes considered as a 'low status job' where one should almost expect threats and verbal abuse. Yvonne did not consider it as such, saying, "Many people around me say things like, 'Oh, poor you who have to work as a security guard', but it's not like that. I actually like it. I see it as a challenge… You know; a challenge in a good sense". The challenge to her was that she never knew what the different shifts would bring, and this included the handling of passengers. She elaborated on this with an episode she had recently experienced in the security control:

> For instance, there was this man in his 40's, these are the worst, you know… men in their 40s and 50s. So he got really upset because he

> couldn't bring his liquor through the security control because the bag he had the liquor in wasn't sealed. He had probably spent 1300-1400 [NOK] on it, and I had to call the shift leader because he was so pissed off. And I was like 'can you tell him why…' to the shift leader, because it isn't me who decides these rules. I'm just doing my job, but I understand that people can be upset about it.
>
> (Yvonne, Securitas)

Yvonne perceived these challenges to be positive and something that gave her variation in her work. In her story, she also touched upon the Securitas 'chain of command' where, in situations of so-called 'difficult passengers', the first step in the procedure was to call on the Shift Leader. If the passenger then did not calm down, the police (which had a small department at the airport) were called and the passenger would usually be denied boarding and escorted away. This happened very rarely, since most often the situations were dealt with before it went as far as what was labelled 'denied boarding'. Yvonne perceived that the chain of command worked well, since calling on the Shift Leader solved her problem and justified her handling of the situation with the passenger. This was not always perceived to be handled equally well by all Leaders[56].

Gro was a security guard in her 50's who had worked in the security control a few months longer than Yvonne. She described herself as being almost a 'veteran' at that point, underlining that people did not stay long in the job. One of the largest problems for Gro was what she perceived to be different practices among the Shift Leaders:

> There are different practices between the different Shift Leaders. Some want everything done a certain way… But then they end their shift and someone else comes on shift and they may question why you do things the way you do. In that manner you are often just left looking like an idiot.
>
> (Gro, Securitas)

She explained that this could occur in situations of doubt. If seen in relation to what the Securitas Leader described in the initial interview regarding the use of situational assessments, this becomes more comprehensible. What Gro had experienced was that at times, asking

[56] The term 'Leader' here refers to superior positions in Securitas, including Leaders of Securitas Sola, Shift Leaders and Coordinators.

questions could be connected with some form of ridicule. According to Gro this variable handling led to people sometimes 'turning the blind eye' on situations when they were in doubt. She explained that she had witnessed this several times. Her explanation of this practice was that some of the guards were reluctant to ask their superiors questions in fear of looking stupid. Gro, herself, expressed that to her it was too important for her to do a good job and that she preferred to be a 'nag' and get things right.

Gro perceived that practices varied between the Shift Leaders and that this resulted in a situation where the support from the Shift Leader was not as automatic as what Yvonne had described. The problems of variable handling of situations by the Leaders translated also into situations of difficult passengers. She perceived that these situations put a strain on her, because she felt that she did not receive the support she should have from her Leaders. She exemplified this by an episode from the security control:

> This guy got really upset in the security control and he said something like… 'If I wanted to, I could strangle both you and your colleague with my shoe laces…' he was asked to take off his shoes and some other things. One of the leaders was also standing there with us, and the only thing he said to the passenger was 'what kind of thing is that to say?
>
> (Gro, Securitas)

Gro thought the Leader handled this badly and that the way the situation was handled was kind of disloyal to her and her co-worker. She thought the passenger should perhaps have been denied boarding, which, as described above, was one of the sanctions possible to use on difficult or threatening passengers. She said she sometimes felt like a 'sitting duck' (Norwegian: fritt vilt), when people could do and act in whatever fashion they wanted. What seemed to be Gro's main complaint was that the reaction from the Leader did not validate and corroborate the security guards' authority. She explained that after the incident, a Shift Leader commented to her that one has to expect episodes like that in that job and that she should not let it get to her. Gro did not feel that this was meant as a supporting statement or comfort, but more as a comment that she should 'man herself' and get over it.

In relation to the carrying out of the regulatory procedures, Gro summed up by saying that she thought that the difference between how the leaders carried out the procedures was what gave her sleepless nights. She continued

by saying that "it is always the positive things that mean so much more than the negative ones. The tip of the scale always goes in favour of staying in the job". She especially perceived that great colleagues made it all worthwhile.

So far, we have seen that working on the front line challenged the security guards. The chain of command was supposed to back up the security guards in situations of conflict, but this was not perceived to work at all times. It was perceived, instead, to be person-dependent. To some, as Gro, this gave the feeling of being powerless and to not get the expected support she needed. However, these issues can be seen as problems arising from the way Securitas was organised and not as a direct result of the regulation.

Next, situations of difficult passengers are described through the account of one of the Coordinators who worked both as a regular security guard and as a Coordinator.

Authority

Mari was a substitute Coordinator, which meant that she worked both as a security guard and as a Coordinator. She did not have the Coordinator job permanently but filled in when they were short of a Coordinator for a shift. Mari had worked at the airport for about three years. I followed her on some of her shifts when she stepped in as Coordinator; sometimes for a few hours, and on a couple of occasions we spent almost her whole shift together. Usually she was located in the security control, but sometimes she had to go out to check or control something. On one of these occasions, I asked her if I could join, thus getting a nice opportunity to talk. We went outside the terminal building toward the fence between the airport and the heliport, where she was going to inspect the fence. We talked about the handling of passengers, and she explained the difference in authority she had experienced between being 'only' a security guard and being a Leader wearing a Leader-armband: "I can see a large difference between my work day with an armband on my arm and when I don't have it on". She pointed to her arm where she was wearing the armband saying 'Shift Leader'. The armband was worn by both Shift Leaders and Coordinators. It was red and stood in contrast to the light blue uniform shirt. She continued: "There can be a situation in the security control, like a difficult passenger or something like that, but all of a sudden they become nicer when you come over wearing the armband". There was, hence, an amount of authority connected to wearing the armband, which

had been easily observed by Mari who had experience as being both a normal security guard and in the Leader position wearing the armband. Mari continued to explain that she had observed this differentiation not only with passengers but with pilots as well and she then told an episode from the security control when a pilot had refused to take off his jacket, as everyone has to do in the control. As he refused to do as he was told by the security guard, they had called on the Shift Leader, "So the shift leader comes and asks him politely if he can remove his jacket, and *then* he takes it off!" In Mari's view, the armband was what had made the difference in this case, and to her, illustrated the difficulty of sometimes receiving respect as a security guard. Pilots and flight crews also went through the same control as the passengers, and she explained that there had been several episodes between pilots and security guards in the security control. Mari was glad that the passengers could see these conflicts themselves, since it often were the security guards who were presented as the 'bad guys' in media. She underscored this by another incident that had occurred in the security control when a pilot had thrown sort of a 'tantrum':

> Actually it was his last day on the job, and I don't know what he expected us to do about that, but he acted like a real 'a-hole'. So the passengers are just standing there watching the whole scene and one of them walks over to the pilot asking him if he's going to fly to Oslo. The pilot answers 'no' and then the passenger says that that was good because if that was the case he would have changed his flight.
>
> (Mari, Securitas)

I perceived that the situations the Securitas employees described were used to portray a sometimes difficult job in which the security guards had to deal with both unruly passengers and pilots. It was perceived as unfair that they received this much opposition and what can be perceived as a lack of respect, since they were only doing their job according to the regulatory procedures.

6.2.3.2 Summary Securitas

Being a security guard was clearly at times a difficult job that required good personal skills. To be in the front line also involved confrontations between the security guards and passengers or airline crew. Their job was to ensure that procedures were followed, regardless of the pressure they were

exposed to. What was described by all three Securitas employees was the importance of the authority of the Shift Leaders/Coordinators in handling difficult situations in the security control. Mari described how the appearance of someone wearing the Leader armband worked as a conflict-solving device. What all three security guards accentuated was the exposed position the security guards were in and that the support by the Leader would be important to aid them when their own authority proved to be insufficient. The experience that the Leaders did not always apply this authority to support the security guards resulted in an unpredictable environment, because it was difficult to know when to expect support or not.

We now move over to the handling companies and the challenges they experienced because of the security regulation. Whereas Securitas could be considered as an enforcer of the regulation, the handling companies were the ones being enforced. This created different challenges for them as a work group.

6.2.4 The handling companies

At Sola Airport there were two handling companies responsible for all aircraft, passengers, luggage, and cargo entering the airport; they were responsible for redistributing or redirecting them and 'turning them around'. This meant receiving the aircraft after landing, guiding it to gate, getting people off the aircraft and giving them their luggage, while receiving cargo that either needed redirecting or sending. Then they organised the turnaround which entailed boarding of the passengers, luggage and, cargo and guiding of the aircraft out of the gate.

The fenced in area on the airport was referred to as the 'airside'. At Sola, one part of the airside had the highest level of restriction and was called the Critical part of Security Restricted Area, or CSRA. This was the area outside of the terminal building where the aircraft parked in front of the gates. This implied that all work related to the aircraft's turnaround, including passenger and luggage boarding, occurred at CSRA. The barracks, a security check point security controlling all persons and vehicles moving into the CSRA, were located between the normal airside and the CSRA. Securitas performed all these security controls.

The handling companies were one of the employee groups most in contact with the security control, as they often had to move between security

restricted areas and non-security restricted areas or between more and less restricted areas. An example of this is the gate personnel who started out in the check-in desks (non-restricted), where they checked in passengers and luggage. Then they moved over to the gates to board passengers on to the aircraft afterwards (restricted). After boarding was finished, they returned to the check-in area for the next flight. Thus, they moved back and forth between the restricted and non-restricted areas and also back and forth through the employee security control. The employee security control was no lighter or more superficial than the passenger control. Another example is the ramp agents who moved continuously between less or more restricted areas at the airport (between the airside and the CSRA). They had to go through security controls for each passing. Some workers experienced up to 20-30 controls during a shift.

As described previously by the Leaders of the handling companies, due to the many demands from different angles, the handling jobs were straining at times. Security was placed on top of this already quite strained schedule, and the security controls easily became an 'arena for tension' between Securitas and the handling companies. However, it was not only time pressure that caused the tension between the two employee groups, but also the experience of inconsistencies and superficiality in the practical enforcement of the security regulation. Since Securitas was the enforcing agent, they therefore also received the negative feedback from the handling company employees. In other words, there was tension between the two employee groups that was caused by how the regulation was enforced in practice. The most frequent points of intersection were the employee security control and the barracks. The barracks are discussed separately in the next chapter section while also appearing in the general descriptions below.

6.2.4.1 Inconsistencies and tension

The relationship with Securitas was an ongoing theme among the ramp agents, where some seemed to be very annoyed with Securitas. One of them was Torstein, who explained that he thought the security guards exaggerated their jobs and that the security controls were, as he said, all a 'play to the gallery'; "You put ignorant 20-30 year olds to tell us how to make things secure […] it really makes me frustrated". He referred mainly to the employee security control and the barracks, which they had to pass several times a day.

Comments from other ramp agents dealt with issues such as the way the security guards did their job. The comments ranged from the security guards being overtly persistent to power-crazed, and some claimed that Securitas sometimes checked unnecessary thoroughly on the body. In summary, the security controls, both in the employee security control and in the barracks were an area of tension between Securitas and the other employee groups.

The employee security control seemed to be equally unpopular with both the security guards and the handling company employees. Several of the security guards I talked with during the fieldwork listed the employee security control as their least favourite working area. Mari, the combined security guard/Coordinator, explained that she tried to switch her shifts in the employee security control if she could. When talking about the employee security control, security guards described that they sometimes felt like the other employee groups saw them as inferior and 'over achieving' in the way they performed their job. They, however, perceived it as just doing their job. This tension was described differently by both sides. The other groups (not including airline crew of the aircraft, since they went through the passenger security control) confirmed much of what the security guards perceived; they thought that many of them were grumpy and unpleasant and did a more thorough job than necessary. One of the handling company employees stated that,

> You can even see it [the inconsistency] among the security guards where some are really persistent and some even grumpy while others are very nice and polite, while others again just do their job quite superficially.
>
> (Middle manager, handling company)

This followed the statement from one of the handling company Leaders, who stated that "There is a clear lack of consistency in how we deal with security. How we check the vehicles in the control and at the barracks shows that there is a lack of consistency". The lack of consistency reflected that the controls were perceived to be superficial and variable, and this caused a loss of confidence in the controls' appropriateness. When the controls were perceived as 'an act' or as described above, 'a play for the gallery', tension rose because people felt that they were going through unnecessary routines and procedures.

Another dimension to this 'strained' relationship between Securitas and the handling company employees was that security was something that everybody was trained to be concerned about. This was closely connected to the labelling of everyone with the security courses[57] so-called 'security workers', which meant that everybody at the airport had a responsibility for security. Everyone was supposed to think 'security' at all times. This was accentuated by statements like: "The invisible security wall is the positive attitude toward security", which was written in one of the summary pages of the security course. When tested out in reality, the strained relationship between Securitas and the handling companies did not lead to increased cooperation. One of the ramp agents exemplified this through a situation where he tried to cooperate with Securitas.

Trond was one of the ramp agents who continually had to go through the security controls. He also described a rather tense relationship with Securitas, and he perceived that it was difficult to cooperate with Securitas in security issues. He described a situation where he and Securitas had interacted:

> Not long ago I saw this woman outside (outside in the CSRA), she was like a cleaning lady or something, and she wasn't wearing signal clothes (you are obliged to use a signal vest outside) and I couldn't see her ID card. I went outside and tried to tell her nicely to put on a vest and get her ID card. She became angry with me and asked me if I was a security guard, which I'm obviously not (because of his work clothes), and told me to mind my own business and don't bother her. I went inside and called security on the 'walkie' and told them about the woman. I continued to hear them (security guards) talk over the radio the next half an hour, trying to find her and stuff. And I was like, you could just have asked me, and I could have shown them where she was and then they could have told her the rules and that way that I was right. It would have shown her that I did the right thing in stopping her and sort of legitimate what I did.
>
> (Trond, handling company)

His frustration was mainly connected with the fact that he was doing the 'right thing', but he did not feel that it was much appreciated. Instead he had

[57] Everyone who was going to work at the airport needed to take a safety and security course. The two courses were computer based and each took around 1,5 hour to go through.

to suffer the scolding from the woman and if it had not been for him listening in on the radio afterwards, he would not have heard anything more of how the situation developed. I asked him what he thought of the episode in hindsight and he told me that he doubted that he would do the same thing again. He explained that next time he would consider looking the other way.

This part has laid the foundation for the tension and perception of inconsistencies in the intersection of practical enforcement of the regulation. In what follows, tension and inconsistency will be elaborated through an actual regulatory implementation.

6.2.5 Case: the barracks

In this section, the tension and frustration become even more evident and elaborated for all the inflicted parties. The barracks is chosen as a case where it is possible to depict the adaptation of a regulation in practice. The barracks solution was also applied at several Norwegian airports and, hence, was considered an acceptable solution by the authorities and not only an emergency solution in a single setting. In order to describe this situation as profoundly as possible, I have included Securitas and the handling companies, both leaders and employees, and in addition Avinor as the airport operator, who is responsible for the barracks arrangement. I begin this section by describing the context of the barracks. I then continue describing the barracks first from the Securitas point of view and then from the handling company viewpoint. Lastly, the leader group meeting (including leaders from Avinor, Securitas and the handling companies) is described, in which the Leader viewpoint is presented regarding the barracks and how these affected the employees.

Most airports faced challenges when the new security regulation was implemented, since the actual construction of the airports was hard to combine with the new demands. Therefore, emergency solutions, such as the security barracks, were designed to solve these problems. The barracks were, as elaborated above, a security check point placed between the airside and the CSRA that controlled all persons and vehicles moving into the CSRA. At Sola Airport, these barracks were operated by security guards from Securitas. The main idea behind the separation of these security restricted areas was to rationalise the security screening of the physical area of the airport. Since there was a much higher level of control inside the CSRA, everything that did

not require the highest level of security screening was, therefore, placed outside the CSRA. Having an area with less control made it easier and less demanding to do certain operations. For instance, by letting private planes[58] take off and land on airside, passengers did not have to go through security screening before entering the plane. Cargo was another area that was handled at airside, as the cargo airplanes landed and stayed on the airside, thus never entering the CSRA. However, the cargo agents were under a separate control regime (regarding security) and were, therefore, approved to screen all the cargo themselves. This caused a practice wherein, for instance, when cargo was to be sent on a normal flight, the ramp agent would have to collect the cargo at the cargo area at the airside, cross the CSRA border and, hence, both the ramp agent and the vehicle would be searched by security guards at the barracks. The cargo would not be screened again.

The level of screening between airside and CSRA had gradually increased year by year. It started out as random sampling of people and vehicles, meaning that only 10% of both people and vehicles were checked. At the time of my fieldwork, they were implementing a 100% check of everyone and everything, which meant that there would be a full security check on both persons and vehicles at every passing. During a shift, a security guard could perform anything from 10-20 up to 30-40 controls. The number of controls depended on the time of day and the level of activities at the airport. For instance, some days there could be much cargo coming in, or it could be much fuelling of aircraft, or it could be much maintenance going on. Thus, traffic passing the barracks could vary.

The barracks were small cabins measuring about 1,5x3 meters. They were placed with the short end (with windows) facing out toward the airside. Inside the barracks, below the window, was a desk large enough for two people. The rest of the barracks was sparsely furnished with a small fridge, a coffeemaker and a microwave at the opposite end of the desk. The door was on the long side of the barracks. There were no toilet facilities connected to the barracks, so the security guards had to walk to the airport terminal a couple of hundred meters away to use the rest rooms there. This was considered to be

[58] Private planes pertain to the category of 'General Aviation' (GA) and include aircraft that are used for everything except scheduled air services. GA includes, among other things, flying clubs, flight training and/or corporate jets.

insufficient by both Avinor and Securitas, however, and an arrangement was going to be made to amend this in the near future (after my stay). Although there were two barracks, one on each side of the terminal building, barracks number 2 was the main barracks where most of the traffic passed, hence its staffing with two security guards[59]. Barracks no. 2 was also the only one open during the night, since it was possible to enter the CSRA through both sides and, hence, both of the checkpoints, although this implied a longer drive for the vehicles that came from the other side of the airport.

We have now looked at the more practical sides and the background for the placement of the barracks. Next follows the descriptions of how the procedures were carried out and also how this was perceived by both employees and leaders for the different companies. We begin with Securitas.

6.2.5.1 The barracks: Securitas

The two guards walked outside every time there was another vehicle passing. The vehicle stopped and the driver stepped outside. I stayed inside only observing and waiting for them to step inside again. The security guards performed the control professionally, checking all the predefined areas they were supposed to check in the car, searching the driver of the vehicle (hand search of the body) and also his jacket. All together the search took maybe 5 minutes. The driver also acted professionally, letting them do their job. Dependant on his job, he would pass this point anything from one to maybe thirty times that day. The security guards came back in. They sat down by the desk and logged the control they just had performed into the log book. I waited for them to finish before we started talking again.

The description above is included to give an impression of how the barracks control was carried out. Despite the impression that everything went on quite unproblematically, there were many opinions and feelings connected to the security control performed at the barracks. I spent several shifts with different security guards in the barracks in order to try to understand the many opinions connected to it. I asked the security guards about the control; what

[59] Barracks No. 1 had less traffic and was, therefore, manned with only one security guard.

they thought about it and what it was like to do that part of the job. On this question, Lena, one of the security guards, turned around to me and sighed, "the control is one of the most meaningless things I do". She continued by saying that "it is against everything I believe in". I asked her to clarify what she meant by this and she continued by explaining that they had a predefined list they should follow in these controls[60]. Through her explanation, it became clear that the whole situation where the guards were only to control the predefined things was what she found to be 'meaningless'. The words 'meaning' and 'making sense' were mentioned several times. She concluded, "You would need two hours and 30 employees to really search through the car". That they used just a few minutes searching through both the car and the driver just underscored, according to her, how superficial the control was.

These words recurred in many of my conversations with the security guards in the barracks. Vidar was a security guard in his 50s who had worked at the airport for seven years. He expressed much of the same opinions as Lena, describing the control they did in the barracks as meaningless. He expressed that what made things appear meaningless to him was consistency, or rather the lack of consistency, between the importance security received and the feeling he had that the security control they performed at the barracks was transparent and superficial. He saw the importance of having security measures, "Security is good, and necessary, but many things we do seem a little... peculiar [så der]". Vidar was also preoccupied with the background for the procedures:

> When something is new [procedure or regulation], there is put up a note on the wall in the break room. I often wonder why? Has anything happened in advance that cause these new rules? I think this is really interesting and it would provide meaning to us all [mening for alle]
>
> (Vidar, Securitas)

Julian, a security guard in his early 20s, asked some of the same questions as Vidar. When, for instance, I asked how they were updated on the new rules, regulations or procedures (usually stricter routines), Julian leaned his chair back from the desk and raised his arm toward a board and tapped with his

[60] I have left out detailed explications of the procedures, since these are restricted information.

pencil at a binder hanging on the board. “They appear here mostly. You’re supposed to read this when you start your shift”. I asked him (with a smile) if he had done this before he started his shift. He began to smile as well, pausing for a bit before he answered that, “well… no. To be quite honest, I don’t remember when I read it the last time”. He rose from the chair, pulled down the binder and starting flipping through it. He skimmed through the pages, giving some comments during this. It seemed like he knew most of what was there, although not everything. After finishing, he pointed at me with the binder “We receive it only like this, you know. I know we are supposed to read it though, but it doesn’t seem very important when we get it like this”.

For Lena, it was difficult to do a job that felt meaningless. She later added that the only way to continue with her job was through not thinking too much about it, “The best thing is not to think. You’re not paid to think, so I try the best I can to just do the job without thinking too much”. This sentence was also uttered by another security guard but in a different context. Roy, a pensioned army professional who was also working as a security guard, had a quite different approach to the job than many of the others I had talked with. I asked him the same questions I had asked everyone else about how he perceived his job and the barracks controls. He seemed to think that the job was easy as could be, adding that he thought there was too much whining from the others “Just do your job! There’s nothing more to it than that. You’re not paid to think about everything. Just do it!”

The security guards in general seemed to agree that the barracks control was so superficial and predefined that they did not see the point in having it. Therefore, the procedure was perceived to be more of an act and their work, thus, ended up being somewhat meaningless. This became utterly amplified, since they did not know the reason behind the routines they were doing, and the new procedures that arrived were just put up on the wall in the break room and the barracks. Consequently, these did not seem very important to the employees.

We now move over to the handling companies and their perceptions of the barracks.

6.2.5.2 The barracks: handling companies

This chapter has established that the intersecting point of the regulation, or how it was practiced, caused tension between Securitas and the handling companies. It has been indicated that the barracks were the point of intersection that caused the most tension. From the preceding sections, we saw that the security guards found the security controls at the barracks to be problematic, and we now continue to the handling companies and their perceptions of the barracks.

We went in a Jeep over to the cargo hangar. Leaving the CSRA, we rushed past the barracks, since no control was required to go into the normal airside area. We went to the cargo area of the airport, picked up a parcel that Lars was supposed to get on one of the passenger aircraft that was leaving within a short time. We went inside the cargo hangar and signed it out before we headed quickly toward the airport terminal again. Closing in on the barracks, Lars slowed down, halting at a line that read 'STOP'. Here we exited the car. Two security guards came out of the barracks. I removed my jacket, which was then controlled by the security guard. Then followed a hand search like the one you receive in an after control in the passenger security control. Then, the guards continued to check inside the vehicle, checking all the predefined areas and parts I had become familiar with after staying in the barracks. The security guards finished their work, said 'thank you' and 'good bye'. We hurried over to the terminal and managed to get the parcel on board well before the aircraft departed.

The description above is provided to give an impression of the other side of the security control at the barracks. The control had become a mere routine for Lars and the other ramp agents, but the control often became a hindrance for the ramp agents who were occupied with completing their tasks within small time frames. That the ramp agents knew the procedures like the back of their hand made the control into more of a ritual to them than something they connected with a security measure. As Lars later added, "If I wanted to bring something into CSRA, I would know how to do it". Through our later conversation, it was obvious that it was not so much the control itself he opposed since he understood well the reason for having controls; it was what they controlled. He knew the control by heart and stated that, "If I wanted to

do harm and to bring something with me, I would never have it in the ... [naming the location]… But they check it eeeevery time the same way". Lars thought that the control was so predictable that he could easily find places to hide things if he wanted to. Thus he, together with most of the people I talked with about this, felt that the control was more for show than anything else. Many expressed that the barracks became a point of annoyance instead of the security measure it was designed to be.

There were variations in the ramp agents' reactions to the security checks in the barracks, where it could vary with the number of times an employee passed through. One ramp agent told me about an incident where another ramp agent had just sped up and passed the barracks at full speed without stopping. This story was used as an example of what the continuous stopping and controlling was doing to them. When the ramp agent told this story, it was told in a humorous manner such that the employee who did this was being praised, in a way, for having the guts to do what many would have liked to do. He was not given the role of a hero or anything like that, but he was given credit for following his own will. I was also told the same story by the security guards during my time in the barracks, but the situation was not portrayed in the same way. The ramp agent was described more as a 'hothead' who had problems obeying rules. The security guards underscored that although they could understand that the ramp agents got bored with the continuous control, the control and how it should be performed was not their responsibility and, hence, should be followed.

Although the episode described above was a more extreme example of how some employees reacted to the barrack controls, it was more typical with small conflicts, exchange of comments and bickering. The security guards who worked at the barracks told that they sometimes received scolding from the ramp agents or were met by an unpleasant attitude when they tried to perform the control. This behaviour was perceived to be unfair, since the control was predefined and they were only doing their job. The ramp agents, on their side, had a quite opposite opinion of the situation, in that they felt the security guards had a bad attitude towards them.

The control at the barracks was there to ensure that people, vehicles and/or dangerous items could not enter the CSRA where the aircraft were located and, hence, allow someone to harm them. The ramp agents had no problem with there being a security control into the CSRA. The problem to them,

however, was that it was perceived to be a time-consuming hindrance that was there more as an act than as something that would actually improve the overall security. Since it was perceived to be superficial, tension rose when this became a delaying factor in their job.

We now continue with the Leaders and their perception of the barracks and the concern this gave them for their employees. The data was gathered through a meeting with the Sola Security Network Group and the interviews with the Leaders of the different companies.

6.2.5.3 The barracks: Leaders and the Security Network Group, Sola Airport

The Risk Assessment Security Meeting was the meeting that came closest to what can be seen as a status check and assessment on security by the Leaders of the different companies at the airport. Attending were Leaders from the Avinor Security Department, from Securitas and from the handling companies. None of the local companies at the airport had legal authority to perform any risk assessments concerning airport security. What they could assess, however, were issues concerning punctuality. Hence, this could be seen almost as entering the 'back door' to security issues, since the meeting's main agenda was punctuality, and security was but one of the 'threats to punctuality'. By focusing, instead, on how punctuality could be improved, the focus was on everything that could be an obstacle to punctuality, *including* security.

Without revealing details about the actual issues and the assessments made of their importance, much attention was focused on the same issues that also occupied the employees. And aligned with this, the barracks received the most attention. The meeting group was questioning quality, resentment and motivation among the employees, seen from both sides of the control. The Leaders discussed and agreed with the employees' claim that some of the controls made little sense, because they were perceived to be superficial. The meeting attendees seemed to understand that the result of this was that it was hard for the employees to comprehend the point of having the control at all. The Avinor Chief of Security (CoS) said he thought the 'problematique' they had encountered in relation to the barracks was very indicative of how security within aviation was organised. Within a system, something could be deemed 'good enough' but when put in a local setting, it could demonstrate to

be neither suitable nor practical. Another Leader said that this should be a concern, and he could not see how this could be fixed until the whole barracks control was adjusted and, perhaps, a new kind of check point was built instead. Participating in this meeting gave me a valuable perspective, because out in the field there seemed to be little conviction among the employees that the Leaders cared much about their challenges. Listening in on this meeting gave me an insight into how the situation seemed to be sort of locked. This was because the system was accepted as good enough by both the Civil Aviation Authority (CAA) and the EFTA Surveillance Authority (ESA) and, hence, there was no room for Sola Airport to reconfigure their system. Thus, the situation was at a standstill. Ideally, there should have been air tight controls (if such things even exist), and also conceived as such, because it was obviously difficult to motivate the employees to embrace the system when they perceived it to be inadequate. The conclusion of the meeting was that since the system was accepted by the ESA, and since they found no grounds to claim that the barracks influenced punctuality (which was the purpose of the meeting), they could not do very much except register it as a concern. At the end of the meeting, the CoS asked rhetorically, "Can we do anything else than follow the book? No. When someone has told us that this is how we should do things, we have no real option to do things otherwise".

I found it significant that although the aim of the meeting was punctuality, it was an apparent overweight of focus put on security issues compared to the other issues that were brought up. I believe that this was caused by a need to discuss security related issues, although they had, in effect, no real authority to change anything. It was also evident that they were concerned with much of the same issues as their employees and were also frustrated that they perceived their hands were tied in most issues concerning security.

6.2.5.4 Summary: the barracks

The barracks had been placed at the airport to fix infrastructure shortcomings that could not handle the demarcation of a CSRA without large alterations of the airport area and the complex of buildings. The barracks were not intended to be used for such a long time, but as time passed there seemed to be no other acceptable or cost-effective solutions. In one of our conversations, the Avinor CoS asked, "Who should pay for such a costly reconstruction? Security is supposed to be paid by the passengers, but I do not

think you will get them to pay for this. We would need special funding in order to be able to pay for something like that". Since the barracks were functional and also approved by the CAA and the ESA, it was hard to raise money to construct a completely new CSRA to phase out the barracks.

Following the accounts of the employees who worked in the barracks, their Leaders and Avinor, which was ultimately responsible for the barracks construction at the airport, it was clear that the barracks was a kind of 'sticky' issue at the airport. It was difficult for all involved parties; the Leaders were constrained from doing anything, since the possibilities seemed small to find better solutions. These constraints were mainly caused by airport economy (limited funding for adaptations without directives from the CAA or the ESA) and the regulatory system, which gave no room for local risk assessments and adaptations. The employees, on their side, had to work with and around the barracks. Both security guards and ramp agents had issues with the control performed at the barracks, with the main complaint being what we can label 'credibility'; for both sides, the control seemed to be more of a spectacle than an actual security precaution. Thus, although the barracks and its effects on the employees were a concern for both the Leaders and the employees themselves, the possibilities for changing anything seemed small and, thus, the situation remained stalled.

We now move over to the fieldwork at the small, regional airport, Fjellvik. Here, the main focus is on how this small airport managed the implementation of such a large, comprehensive and detailed regulation that was not intended or designed for small airports.

6.3 Fjellvik Airport

6.3.1 Introduction

I left from OSL, Gardermoen to Tromsø (Norway's eighth largest city) in a Boeing 737 with room for 131 passengers. From Tromsø, we moved over to a 39-seater Dash 8, and then we followed the milk round, landing on several small airports, before we finally were closing in on Fjellvik. Not long before arriving at the airport, we went into heavy snow weather with much wind. Just some 10 minutes

earlier the weather had been sunny with clear blue skies. The pilot explained to us that due to the wind, he was not sure that we would be able to land but that he would try. The snow was so heavy that I wasn't able to see the runway as we were attempting to land. We tried to land twice but had to abort the landing both times. After the second failed attempt, the pilot informed us that we had to fly to another airport some 300 kilometres away. We were three passengers who were going to Fjellvik on that flight, so after landing the three of us were put in a taxi that would drive us the 300 kilometres back to Fjellvik. Halfway, the taxi driver stopped at a roadside cafe where we were to have dinner, paid for by the airline. There we sat, the three of us, only connected by a wish to travel to the same place, eating our dinner making small talk, while the taxi driver sat outside with his coffee cup and cigarettes. After about 30 minutes had passed, we all found our places back in the taxi continuing this randomly compounded road trip to Fjellvik.

This small story illustrates the different reality in which the smaller airports operate. The small Dash-8 planes travel between these local, often remote, places, in some ways functioning more like buses. This is one of the main forms of communication between these small places and the rest of the world, and there are often large distances between them. In addition there are often few passengers either leaving or coming to the airport. Many of these airports are located north of the Polar Circle, and one should expect rather than be surprised by tough climatic conditions.

Fjellvik Airport is one of the 26 regional Norwegian airports and is located in northern Norway. The regional airports in Norway are in a quite different situation and have additional functions to what the other airports have. It has been a clear priority in Norwegian regional policy to maintain and uphold communication between small communities and the rest of the country to avoid depopulation. Therefore, there has not been an exclusive demand that the regional airports should yield profits, but rather that they should be upheld as a service to the public. This is also exemplified by the service of medical transportation, which in many cases is done by airplane. This makes it even more important for the communities to have an operating airport.

The township of Fjellvik had, at the time of my stay in 2009, approximately 2.000 inhabitants. The economy has historically relied mostly on fishery. While this has receded, the main industries in the town are still largely fish and fishery products, in addition to tourism. Fjellvik is also a port that the coastal steamer (Hurtigruten) calls on twice a day. Except for that, the town's communication with the outer world is by the main road that goes over a mountain pass. If the weather is bad, one could risk not being able to drive over the mountain or having to expect convoy driving.

At the time of my visit, the airport had 26 employees (full- and part-time), with 13 of them employed by Avinor. The 13 others were employed by Securitas and the handling company. Four flights arrive and leave Fjellvik daily, and the passenger number was approximately 11.500[61] in 2009 (Avinor, 2013a).

Within security, all airports in Norway, including regional airports, are defined as large airports; meaning that regulation is not divided into small or large airports. This was also the main reason for including the regional airports in this study. I wanted to find out how the airport employees were able to implement and work with the comprehensive regulation in an environment that was not constructed to handle it. How were they able to distinguish between clean and unclean passengers? And how was it perceived to have to implement a regulation based on a risk scenario that did not seem suitable to the actual risk scenarios they were faced with? In order to answer these questions, I followed the airport employees in their jobs to see how they managed their duties (both in relation to security and other tasks) and how they met the demands of the regulations they were obliged to follow. I spent the most time with the Airport Director (AD) and the Chief of Security (CoS), who were working more directly with security related tasks, although I took part in all other activities, including handling and receiving aircraft and passengers, clearing the runway of snow and spending time in the airport tower. I also talked with the security guards working at the airport.

What follows is a description of how the employees at Fjellvik Airport adapted the security regulation into the context of the airport.

[61] Not counting transit passengers

6.3.2 Transition and adaptation

The airport in Fjellvik had not been constructed to handle the separation between clean and unclean, regarding either passengers or luggage. Since security-screened passengers and luggage needed to be separated from the unscreened (the clean from the unclean), the airport had to address this problem after the 2320/2002 regulation was fully implemented in 2004. They had done construction work to build a wall between the entrance area and the waiting area where screened passengers could wait for their flight. Prior to this, the part of the terminal building open to the public had been one large open room with no separation. The waiting area had a gigantic window, giving the waiting passengers an orchestra seat to everything that went on out on the airside[62]. The security control, with an x-ray machine and a portal (metal detector), was placed between the entrance area and the newly constructed waiting area. Thus, they were able to meet the criteria of Regulation 2320/2002 regarding the separation. However, when an airplane was about to arrive, it became more complicated. Outside on the airside where the runway was located, there was no fixed Critical part of Security Restricted Area (CSRA). The security regulation, however, stated that when an aircraft opens the door, both passengers and luggage on board the aircraft are 'clean'. In order to not 'contaminate' the clean passengers and luggage, the airport also needs to have a separation between clean and unclean. For Fjellvik, to have a permanent CSRA would imply many additional measures and precautions that would make the daily tasks and operations on the airport much more complicated for airport employees working between the flights. For instance, if all of the airside should have been a CSRA, all vehicles and personnel that had a working task within the airside would have to be security screened and, hence, could not move between the inside and outside without being screened every time. It would resemble the security check described at Sola with their barracks control. This would have meant that additional security personnel would have to be employed for this. In order to avoid these additional measures, an adaptation called 'CSRA in time' was made. The point with 'CSRA in time' was that instead of having a fixed CSRA zone, the

[62] Airside includes the runway and its surrounding area (some 70 metres on each side of the runway) and the area between the runway and the airport buildings. All of this area is fenced in

zone was established every time there was a flight. The person that was going to receive the plane went outside on the airside and was met by a security guard. The security guard performed a security hand search on the person, and the person was now deemed clean. Then the person would begin to pace off an area in which he placed markers in every corner. This zone had now become 'CSRA in time'. When an airplane arrived, it had to park within this area which was then the CSRA. This procedure went on every time a flight was expected.

I talked with the Avinor employees who were responsible for receiving the flights, about how they perceived this arrangement and going through this procedure every time a plane arrived. The arrangement was clearly unpopular and perceived as somewhat unnecessary since everybody at the airport knew each other and everyone who worked at the airport had a security clearance. The procedure thus seemed to be more an act with no real function. In addition, it was regarded as somewhat uncomfortable to be hand searched right outside the large window where the passengers were waiting so they could watch the entire spectacle. I asked if it was possible that this search could be done in another place, but evidently this had been difficult to accomplish, and that they had tried to improve these procedures earlier but had not succeeded. Through the explanations I was given in relation to this performance of the regulation, what seemed to bother the employees the most was not the actual security hand search but that they did not feel there was any point in doing this, especially not on this remote airport where everybody knew each other. As long as it was perceived as an act and not as something 'real' to improve security, it seemed to be hard to take it seriously. Because of this, some reluctance was connected to performing the procedures although the employees carried them out regardless. In addition, that this had to be done in front of an audience that for most parts consisted of people they knew from their own community was by some considered somewhat degrading. After all, they were security cleared and worked to improve security at all times at the airport. This responsibility and trust they were normally entrusted with was taken away from them in a moment as soon as a plane arrived.

6.3.3 Priorities – Being a small fish in a big pond

A large part of the regulatory transition of airport security can be seen as a change in priorities. In the old system there seemed to have been a much

larger degree of self-governing at the actual airport. This meant that much of the assessments of priorities would happen at the airport and not be predefined from the central office. This was also important for the areas of security and safety, which was not as clearly separated but more assessed according to importance in each specific case. This changed drastically after the implementation of the very detailed and predefined Regulation 2320/2002. Thus, we can say that there was a large decrease in self-governance and local risk assessments, especially regarding issues approximating security. With the centralisation of regulation, there had also been a recognisable retrenchment of the airport's self-determination in general. The Airport Director (AD) explained that it had been very important for the smaller airports to negotiate deals for various services and get them as cheaply as possible, since they operated on limited budgets. As an example, he described that Fjellvik previously had a very favourable deal on diesel fuel with a local supplier. Diesel was used for all vehicles at the airport and was bought in bulk. One day, they received a message that Avinor's central office had negotiated a deal with a national supplier and that all Avinor airports from then on should use this supplier instead of their own. The new deal meant that the cost of diesel was now 0,7-0,8 KR more per litre than the other deal they had had with the local supplier. Through this example and situations similar to this, the AD had perceived that a wave of centralisation had followed in the wake of the transition to the security regulation. It was in connection to issues like the diesel fuel case, that expressions like 'Bjørvika (the location of Avinor's main office) is a long way from here' were applied, implying that not only was the main office far away geographically but it was also experienced as being far away when it came to decision making and possibilities to influence or even receive information. It seemed that the airport employees felt they had limited influence on things that were directly affecting their daily work lives.

The perception that Fjellvik Airport was far away from Bjørvika, may also have been caused by a restructuring of Avinor in 2005 and not by the regulatory change alone. The AD explained that things were organised differently prior to 'Take-Off 05'[63]. Up until 2005 there had been regional

[63] 'Take-Off '05' was a reorganising and cost-saving process implemented by Avinor. The proposition, passed by the Avinor board on 4.12.2003, stated that in

offices to which every airport pertained instead of one central office, which happened after Take-Off ’05 went into effect. Fjellvik had previously pertained to a regional office in the North of Norway. The AD explained that,

> it is clear that the competence of a person who already sits in the North of Norway, and who knows the local conditions, finds it easier to see common challenges and problems to, for instance, the Northern areas. Now it feels like we’re a little forgotten.
>
> (Airport Director, Fjellvik)

He continued by underlining that although they were very content with the people from the main office who worked with the regional airports and perceived them to do the best they could, they also understood that there were limits to their capacity as well.

> They do the best they can… But you know it isn’t always as easy to get answers from Bjørvika. This is the greatest difference between the regional and the larger airports, because at the larger airports they have dedicated personnel as secretaries and production managers. Here we have to be everything at once […] we all wear many hats.”
>
> (Airport Director, Fjellvik)

This was also exemplified a few days later when I arrived at the airport in the morning, and the Airport Director was nowhere to be found. When I later encountered him, he told me that he had been working in the airport tower directing the air traffic, since the two regular employees (AFIS[64] agents) were both absent for various reasons. The AD had previously worked as an AFIS agent and was, therefore, also licensed, which one had to be in order to work in the tower. Thus, in order to maintain traffic to and from the airport, he had to step in to the AFIS duty and postpone his regular duties.

Hence, the employees perceived that after both the regulatory change and the reorganising processes Avinor had been through, there was a marked decrease in the power of influence. The AD exemplified this further through

2006, Avinor should achieve an annual cost-reduction of 400 million KR and reduce the total staff by about 700 employees (Voldnes, 2004)

[64] AFIS stands for Aerodrome Flight Information Service and the AFIS agent’s task is generally to provide local flight information (to the aircraft), alarm and emergency duty and weather observation. They work in the tower at the airport.

the signing of the new contract with Securitas as the main supplier of airport security[65]. Until the new Securitas contract was signed, Widerøe[66] had been the main provider of security services on many of the small airports. Since Widerøe was the airline company *and* the handling company, one of the reasons for choosing another supplier was the policy that a company should not screen itself. The AD explained that before the contract was signed, they had been invited to write an e-mail to the central office to share their thoughts on new security providers and what they thought this service should entail. After this invitation to contribute and the response the AD sent, they heard nothing until the contract was made with Securitas. Sometime after the contract had been signed, the AD and the CoS were invited to a meeting for leaders of airports in their region where the contract was presented, including its demands and instructions. This presentation was made by Securitas employees. Among other demands and instructions, it was stated that Securitas should from then on have their own offices, changing rooms and facilities. The AD perceived that there was no room for discussing these issues, as the representatives who had been in charge of negotiating the contract were not present at the meeting. It was clear that the purpose of the meeting was not to negotiate the contents of the contract but to inform the airport management of their obligations according to it. Thus, although the airport building at Fjellvik was not built in a way that made it easy to accommodate Securitas' demands, it was not possible to discuss or negotiate this at the meeting. After the meeting, they had to organise it the best they could, amending the airport in order to meet the obligations in the contract. To accommodate one of the demands, they ended up redecorating the handicap toilet to make it into a changing room/office for Securitas. Although it was a solution no one was overtly happy about, at the time it was the only possibility they had had to facilitate it on such short notice. This became a recurrent issue, since the security guards felt this was not a very good solution, and the AD, as the airport director, was asked by Securitas' central office on several occasions to fix this. In an attempt to try to work something out, he invited Securitas to come to the airport so they could try to find a

[65] This was the same contract that was celebrated when I did my fieldwork at Sola.

[66] Widerøe is the largest airline in the Nordic countries that is operating on the regional airport network.

solution together within the possibilities of the building. The answer he received was that if they were to come, Securitas would charge six hours per person who went up there that the airport would have to pay. The AD was quite annoyed by this and chose to not go forward with the invitation. His perception was that he had tried to be forthcoming in finding a solution but felt that instead he was met with additional demands in addition to an economic cost. He thought this response from Securitas only illustrated that they were not interested in finding solutions and cooperating with them. From having a local provider of security where conditions could be discussed locally, it had now become a national contract where the individual airports had less power or influence. They perceived themselves to be more or less receivers of information with little possibility to influence or take part, and their job was only to comply.

In a small airport with few employees, the organisation of the airport is very different from a larger airport. With only four departures a day where the first flight leaves at 9:00 in the morning and the last leaves at about 22:00 in the evening, there was no need for much personnel, and the ones who worked there had to divide all the tasks among them. Thus, as the AD also said, they did not have dedicated positions like secretaries or managers in the different areas; instead everybody performed various positions simultaneously. The largest, and perhaps most important, consequence of having several positions at once was that at times it took time away from equally important tasks. When priorities were predefined, as it was in the security regulation, the assessment and prioritisation could not be made on-the-spot. Thus, if there were tasks that conflicted with each other, the employee could not make the assessment him- or herself but had to follow the predefined prioritisation, where security most often had precedence. This was an important issue for the employees and is described next.

6.3.4 A safe airport

To talk about the areas of safety and security in a small airport is a complex issue with sometimes conflicting goals. In the One-Stop Security rationale, it makes perfect sense that all airports that are going to be part of a system that feeds ‘clean’ passengers, cargo and luggage into the system need to have the same level of security screening. In other words, it was not the principle behind One-Stop Security that was a problem but applying it at the

small, regional airports sometimes created conflicts between safety and security. Since aviation is preoccupied not only with securing against intended attacks (security), but also with accident prevention (safety), it is difficult to predefine, in a regulatory system, when and how there is a need for the one over the other. However, a system in which security most often has precedence, this could create conflicts at small airports with less capacity.

In Fjellvik this clash of interests happened frequently. Perhaps the primary reason for this was that they had to perform the same tasks and do the same obligatory work as all the other airports. An example of this was the 'local regulation' which was an adaptation of Security Regulation 2320/2002, and it was obligatory to have this on each airport (the same local regulation described under Sola Airport). Adaptation in this connection did not imply that adjustments or alternative approaches were made to the original regulation. In most ways it was more of a specification, since the local regulation specified the demands described in the regulation. An example of such a specification could be that since the regulation demanded that all doors leading into the airside should have a card ID check, the local regulation would describe how this was accomplished: e.g., 'the entrance door (door ID xx) on the west-wall leading in to the Avinor office area has a card ID-check'. Creating this local regulation was a large job, especially because it was an ongoing process as new regulations came from the EU and had to be implemented at each airport. At the time of my stay in Fjellvik (April), they were working hard with this local regulation, because of a completion deadline in September. Everyone at the airport had to contribute, but the Chief of Security (CoS) was in charge. The writing of the local regulation was hard work and that sometimes it occupied all of the CoS' time. He did not feel that this kind of work (meaning office and computer work) was his forte. He humorously depicted this by holding out his index finger and saying "with my one-finger touch-method, writing a regulation takes time". He had worked operatively most of his working life and he felt that he was doing a good job with all his tasks at the airport. With his joke about the writing of the local regulation he underscored that he felt trapped in work he was not very good at, instead of using his capabilities for operative work. He was not an office worker, but he was, in a way, forced into being one. However, he did not feel that he was using his skills optimally when he was sitting in front of the computer to work with the local regulation. This predefined prioritisation was

also emphasised by the AD, who described the relationship between what he was obliged to do and what he himself wanted to do as sometimes in conflict. He spent far more time doing paper work and dealing with bureaucracy than he thought was right, because for him what happened out on airside and the runway was what was really important. I asked him how his job would be different if the regulation returned to how it was before Regulation 2320/2002; he demonstrated this by pointing his finger from the computer at his desk, then pointing it out the window to the runway and said "then I could start running an airport again". His point was the same as what the CoS had described, that he felt like he was spending too much time within his office, while simultaneously thinking that his focus should be out on airside.

The descriptions above illustrate the conflicts that arose between safety and security, which mainly were about time management and focus. We can see this as describing the complexity of maintaining a safe airport. While safe procedures, good security regulation and a unified system were important elements of running a safe/secure airport, these sometimes were in conflict with each other. This is not to say that the airport procedures at Fjellvik was not fulfilling the demands they were obliged to perform, but that it was difficult for the employees to manage all the demands that sometimes were in opposition to each other. Simultaneously, it was perceived as difficult that their own assessments, based on years of experience of what was important and how prioritisations should be made, had to be set aside and they had to just act according to the regulation. This also created another issue, because by implementing the same regulation at all airports meant that the regulation was prepared according to a given risk and threat scenario. It is easy to see when comparing the risk scenarios for the large international airports, such as Heathrow in London and Charles de Gaulle in Paris, or even OSL Gardermoen, that their risk scenarios would be different than in Fjellvik or other regional airports. While Fjellvik was a gate into the system like any other airport, the risks in Fjellvik were of a quite different character than those of the large European airports. In many ways, the risks Fjellvik was most often faced with were safety issues. The airport was located in a tough climate where getting the aircraft up and down safely was their major concern. Much could go wrong in a setting like this, and this was also the reason why the employees felt like this was where their focus should lie. The AD explained that "the problem with the time consuming processes is that it moves the

focus into the building and away from airside. What has that got to do with safety?" He thought that there were some major differences between the regional airports and the larger airports by virtue of the societies where they were placed:

> The thing about the regional airports is that everyone knows everyone, and we have done so for generations. The conditions around here are also so small which means that we know the most about everyone. Thus, we know when someone is from the outside and we are then more aware".
>
> (Airport Director, Fjellvik)

During the conversations with the airport employees, they did not express a general negativity with having a security system. What they did express was their perception that the current system did not really fit the context. To them, the security system bore no relationship to the threats facing the airport, it disqualified them from adapting the regulations, and in some cases it resulted in strange solutions because it had to be carried out so literally.

From one of the smallest airports in Norway, we now move over to the largest airport in Norway, OSL Gardermoen.

6.4 Oslo Lufthavn (airport) Gardermoen AS - OSL

Oslo Airport Gardermoen (airport code OSL) took over as Norway's main airport on the 8th of October, 1998. It replaced Oslo Airport Fornebu, which began to have capacity problems during the late 1980's. Thus, OSL was a fairly new construction and has been in continual expansion vis-à-vis both revenue and passengers. Compared to other main airports in the Nordic countries, OSL was in second place in 2010 if rated by the number of passengers, being surpassed only by Copenhagen.

Table 3: Growth at the main Nordic airports (2009-2010)

Airports	Passengers	Growth 2009-2010	Share of inter-national traffic
Copenhagen	21 501 750	9,10 %	89 %
Oslo	19 091 113	5,50 %	53 %
Stockholm	16 962 544	5,60 %	76 %
Helsinki	12 883 400	2,20 %	83 %

(OSL, 2010)

OSL was funded differently than the other Norwegian airports, since it was formed as a daughter company under Avinor. Thus, funding was given through a state loan and not by money granted through the state budget, which was normal procedure. This difference was also demonstrated through OSL's role in the Norwegian aviation system, in which OSL was juxtaposed to the other groups of airports: small, medium and large (See Figure 1, page 28: The Norwegian Civil Aviation System (2008)). Here, OSL's independent role becomes more prominent. The differentiation between OSL and the rest of Avinor became a prominent feature throughout my fieldwork. OSL was Norway's only de facto large airport compared to the other large European airports, and it was, thus, the only airport really constructed to handle a regulation like 2320/2002. Because of the differentiation, OSL also had a much larger degree of self-governance, which translated into how they adapted and adjusted challenges caused by the security regulation procedures. In what follows, the aim is to provide examples of how the implementation of the security regulation worked at an airport constructed to handle it.

6.4.1 Differentiating OSL and Avinor

As already indicated, OSL held a unique position in the Norwegian civil aviation system, as the airport was in a category of its own. This was also reflected in its identity, wherein OSL employees did not seem to identify themselves as Avinor employees, which in reality they were. For example, shortly after my arrival at OSL, I noticed that the Avinor logo was absent from the airport, and I also noticed that things were talked about in terms of OSL and not very often in relation to Avinor. During my initial conversation

with the Chief of Security (CoS) at OSL, we talked about this. He confirmed that OSL had a very strong identity. He added that this had been even stronger before he started working there in 2004, when OSL had a much more fixed perception of its own identity. Although it had become more open, the OSL identity was still strong. Even if all airports were owned by Avinor, it was evident that OSL's special role did something with its identity as well. Not only was OSL Norway's main airport, but at times it was also more or less placed on equal terms with Avinor when it came to representation in national and international forums. The CoS explained that this special status began with the way OSL was financed. In addition, they had a different position than the other airports when it came to influence. For example, in the different forums that the airports could influence (nationally and internationally), it was typical that Avinor sent one representative on behalf of all the 45 Avinor airports and that OSL sent its own representative. Therefore, it was much easier to coordinate issues and opinions from OSL than it was for any of the other airports that only had one representative for them all. Another example of OSL's position was in the quarterly 'Security Forum' meeting. This was a meeting for all the large airports discussing issues concerning security. Here, the OSL Chief of Security (CoS) was the manager of the meeting, and he was, therefore, the representative on behalf of the forum also. In that meeting, he mainly informed the other Airport Directors about the movements regarding security equipment and procedures in the EU. His role was thus different from the other representatives in the meeting.

It was evident that OSL was pertaining to its 'own league' in the Norwegian aviation system and that they identified themselves more as an own organisation than as an Avinor-owned airport. For instance, this identity could be seen in the usage of the airport code[67] OSL when referring to the airport. Among the OSL employees, this airport code was used as a proper name, as one does with 'real places', such as cities or towns. During one of the first days of my stay at OSL, one employee expressed this:

> OSL is a city in its own right. All together we are 12.000 people working here, which is quite large compared to a city in Norwegian scale. We work here 24/7, and we have police, infirmary, fire

[67] The airport codes are given through the 'International Air Transport Association' system, or IATA, and are used to identify the world's airports

> brigade, etc… Everything that a normal society has […] We even have our own ZIP code.
>
> (OSL/Avinor employee, OSL)

This underscored the identity of OSL being conceived more as a society than 'just' an airport. I later also learned that OSL had its own e-mail domain, @osl.no, in contrast to all other airports including the central office in Bjørvika, which all had the domain @avinor.no.

As outlined above, OSL was also more autonomous when it came to choosing different solutions than the other Avinor airports. The contract with the security company G4S is as an example of this autonomy, since OSL is the only Avinor-owned airport that held its own bidding on their airport security service, while the other 45 Avinor airports fell under the same contract with Securitas as the sole provider of security screening services.

The next part focuses on how OSL was able to act more autonomously and how this solved some of their challenges.

6.4.2 Separating OSL and Avinor

At OSL, there were systems and an economy that one could not find at any other Norwegian airport. The systems of improvement pertained to a different scale and entailed different possibilities than the other airports had. For example, the contract OSL had with G4S stated that G4S had the responsibility to provide the security level as defined in the contract, while OSL, as the airport operator, had the responsibility to make sure that G4S had the possibilities (physical and environmental) to perform to that level. In itself, this was not much different from the situations at the other airports, where Avinor was responsible for facilitating the environment in which the security company would work. However, the difference was that OSL seemed to have a bit more elbow room in this facilitation. The CoS explained that, for instance, OSL had hired Det Norske Veritas (DNV)[68] to do a survey for them in 2007 to find out how the security guards perceived their work environment and jobs in general. The main results from the survey were that the physical design of the security control area was inconvenient and troublesome, that the noise levels were high and that people were complaining about physical pains

[68] Det Norske Veritas is a risk management consulting company

caused by the hard floors. Based on the results of the survey, OSL were reconstructing the passenger security control with a budget of 30 million NOK at the time of my fieldwork.

Another survey had also been conducted on the issue of satisfaction among the passengers in relation to the passenger security control. The results of this survey, given to 400 passengers, were that most people were satisfied with the security control, despite the sometimes negative focus the security control had received, especially in the media. A recurrent theme, however, was complaints about the service-mindedness among the security guards, who received some negative feedback, especially regarding communication. This was an area the airport management were working on at the time of my fieldwork and was reflected in the meetings I attended regarding the security service. Here, the survey was applied as a foundation for future work to enhance the service level. In one of the Security Network Meetings I attended at OSL, this survey was the main issue on the agenda. The results from the survey had been important in deciding the strategies for moving forward and improving the security service. They had decided on a security campaign that should be launched simultaneously with the opening of the new security control, which was under construction at the time. The campaign's main goal was to improve the relationship between passengers and security guards (based on the passenger survey) and the working environment for the security guards (based on DNV's survey from 2007). The key words for the campaign were words like 'quality' and 'communication'. Hence, the realisation of the surveys depicts a very different situation in handling issues than what I observed at the other airports. OSL were able to apply a much more systematic approach to assessing problems and dealing with them that no other airport would have the possibility to copy, due to both economic and autonomy restrictions.

The time I had at OSL provided valuable insights into the implementation of the security Regulation 2320/2002 in practice at an airport that was able to handle it. This is not to say that there were no challenges for OSL in relation to the regulation but to demonstrate that there was a quite different way of handling challenges than the other airports I have presented in this chapter had the possibility to do.

In addition, at a large airport, many obstacles disappear that one can find at the smaller airports. For instance, at OSL, all of the airside area, including

cargo, was located within the CSRA. Therefore, they had no need for a security control between zones at the airside, as both Fjellvik and Sola had. The result was that the job of ramp agents, for an example, was quite different in Fjellvik and Sola than at OSL, because all operations they did during their work day were located within the CSRA. Consequently, the only security control the ramp agents went through during the day was the employee security control when they came to work. Because of this, the ramp agents did not need to relate directly to the security regulation as did their colleagues at the other 45 Norwegian airports.

In summary, we see that operating according to the security regulation at a large airport as OSL was quite different in nature than at Fjellvik and Sola airports. OSL's autonomy and resources, in addition to its size, made adaptations and adjustments possible. This difference is further discussed in the final part of the chapter.

The next part shifts the focus over to the airline crews and the challenges the security regulation presents for their job.

6.5 The airline crew perspective

Crewmembers can be considered to be nomads, in that they continuously move around and, hence, are not deeply rooted in any one airport. The media have given much attention to the obstruction the security regulation has caused for airline crew in their work. After the implementation of Regulation 2320/2002, conflicts became prominent between airline crews (mainly through the Pilots' Association) and the airport operator (Avinor), together with the CAA (as the enforcer of regulation). The pilots have opposed and criticised the way Norway has implemented the security regulation. No other professional group has received similar space in the media as the pilots have.

During my fieldwork at OSL, I interviewed airline crew members, crew coordinators (mainly chief pilots) and representatives from the Pilots' Association[69]. There were mainly two recurring issues during my interviews with these representatives. The first was the claim that there were different practices between airports and across countries, despite the fact that the regulation should ensure similar practices across all airports and countries pertaining to Regulation 2320/2002. The second issue treated the difficulties

[69] See Chapter 4, 'Methodology' for an elaboration of the interviews

caused by the implementation of the regulation, especially at the regional airports. The Pilots' Association claimed that the security regulation and its demands generated safety issues for the pilots. This is further described in the next section

6.5.1 Security regulation and airline crew

In the interview with the Pilot's Association (PA) representative, who was also a pilot for SAS, he explained that the Association worked for two particular goals regarding the security regulation: first, a simpler, standardised regulation with fewer details and more consistency; secondly, a more reasonable enforcement of this regulation. He explained that, for example, it did not make sense to the Association that some people were exempt from the security control, while the pilots, who operated the aircraft, had to go through the security control. The people who were exempt from the security control, the PA explained, were people from the ministries, police and customs, in addition to some predefined customers (unnamed). The PA expressed that having exempt groups meant that the regulation actually had room to make this exemption. Why these people were exempt and others were not made little sense to the pilots who were subjected to the same security screening as the passengers. Their main argument was that if the pilots wanted to inflict harm on aviation, they could do so by using the aircraft as weapons since they, only minutes after the security screening, were in control of an airplane. Thus, why some groups were exempt from the control, where the pilots were not was incomprehensible to them.

Some of the main quarrels between the security guards and the pilots have occurred on the actual airports. Generally, the conflicts have followed two directions. First were those conflicts caused by direct confrontations between the security guards and the pilots, in which the themes revolved around the interpretation of the regulation. As an example, in 2007 there was a case where a Widerøe flight was cancelled after a quarrel between the pilot and a security guard (Rapp, 2007). The pilot claimed that he had already been through the security control and was not obliged to go through it again. The security guard on the other side claimed that the pilot had to go through it again. The quarrel had been heated and was taken in front of passengers at Hammerfest airport. The result was that the flight was cancelled, since the pilot felt he was too agitated to fly safely. Apparently, the security guard had

been right since everybody who exits the CSRA, pilots included, is obliged to take another security check to re-enter it. Thus, the first direction of the conflicts is those direct confrontations caused by different interpretations of the regulations. The second direction of the conflicts, however, was more indirect, typically caused by building constructions and logistics. These conflicts were mainly outplayed on the small airports often involving Widerøe pilots (the company that mainly operates the small airports). On these airports, pilots and crew often had to leave the CSRA in order to enter the airport building. Usually, due to limited building capacity, the break room and even the toilets were located outside the CSRA, which meant that pilots and crew had to exit the CSRA to use the airport facilities. To re-enter the plane, they would have to go through the security control again. When combining these logistical and constructional elements with other variables such as time pressure and stress, this constituted the second direction of conflicts. These conflicts were often outplayed in the security control and could be conceived as an obstacle to the pilot being able to do his job. Even if the results were not direct conflicts, it seemed to create a generally negative perception of the security system, in which the security control was seen as an obstacle to the performance of their regular duties.

6.5.2 Different practice at different airports?

One of the major factors in having a single regulation for every airport across Europe was to have a standardised performance that would ensure an equal level of security. In theory, this meant that going through the security control in one place should be more or less identical to any other place. The impression given by the crew (pilots and cabin crew) was that they did not perceive the system to be this universal. This was perplexing, considering that these people had an actual possibility to compare the different practices between airports, since their job was, after all, to travel from airport to airport across the world. Variations could be expected to a small extent. As mentioned previously, there is always a possibility to implement more measures or to a certain extent the security guards could do some situational assessments. However, the difference in practice the crew described went beyond this. One pilot who had worked for many years with the SAS had experienced clear differences between both countries and airports:

> I think there is a different kind of focus on security in other places. For instance there is a clear difference between Spain and Norway […] In Spain the whole source of irritation has been removed because they let pilots go through even when the machine beeps. They don't do the 'after-control' on pilots. Take for example the ID card. Today in Norway this is not used as a 'control point'. In other places the card is always checked. Just think about the uniform! There are several things with the uniform that ticks off the beeping; the belt, your wings… In Spain they just wave you through. No one reacts to that; neither the security guard nor the passengers […] You have to trust somebody…
>
> (Pilot, SAS)

Spain is obliged by the same regulation as Norway, due to its EU membership. Therefore, in theory there should be no different practice between Norway and any of the other EU countries.

There were many stories of different treatment in different airports. Common to them all was the perception that Norway, often together with England, was the strictest country in enforcing the regulations. Although England, and especially Heathrow, was mentioned as about as strict at Norway, it was not perceived as annoying. As one pilot said "it may be that London and Norway are equally strict, but everything is just more seamless or painless, so it doesn't seem that way". As the representative from the Norwegian Pilots' Association said in the first interview, there was a wish for a more standardised regulation, and since there was a perception that there were variations between airports and countries, for crew and pilots this resulted in annoyance and negativity towards the security regulation and the Norwegian enforcement of it.

6.5.3 Avinor on the crew controversies

The discussion around crew and regulation was also discussed by other interviewees who had different views of the problems the pilots expressed. The issue of crew (especially pilots) and the security control was discussed in one of the interviews with the Sola CoS and another employee in the Sola Security Department. The CoS described his view of the crew controversies:

> I think that it sends a signal to the passengers that the pilot has to go through the security control. I know that this has been a somewhat controversial issue since the pilot in practice can do whatever he

> wants with the airplane when it's in the air… Ok, so take for example this new HMS [Health, environment and safety] leader we have. We had this meeting the other day and there was a cable lying across the floor. He refused to begin the meeting until it was taken care of and secured. When a leader has this kind of attitude, it will eventually rub off on others, too. You take it more seriously. As it is now, the pilots don't take this responsibility, but I believe that if they had stood out as good examples, the 'flock' would have followed them.
>
> (Chief of Security, Sola)

The other Avinor representative agreed with the importance of the signal effect and elaborated that, "I'm not sure that the pilots today are aware that they have this leader position, but in their defence they never asked for it, but then again they do certainly not embrace it". The paradox, for the pilots, as also touched upon by the CoS above, was that the pilots had to go through the same security control as everybody else, although they were already thoroughly background checked and, most importantly, they had control of the aircraft and could cause disaster if they wanted to. The CoS had no trouble understanding this argument, but he countered this argument with a new question:

> What if someone, let's say a terrorist, switches the pilot's suitcase with another suitcase containing something harmful? Or what if a pilot's family is held hostage to pressure the pilot into bringing something onboard the plane? I know these are only fictional examples, but they are not inconceivable. So in one way, you can say that 'forcing' the pilots to go through the same control is a way of relieving them from possible harm and responsibility, too.
>
> (Chief of Security, Sola)

Much work has been done, especially regarding airport construction, in an attempt to accommodate the Pilots' Association demands. In the aftermath of the extended media coverage from 2007 and onwards, large restructuring grips were initiated to, for example, move the break rooms and bathrooms over to the CSRA, which eased up on the need to go through excessive security controls. But this has not been possible to do everywhere and has,

therefore, continued to be a stress and annoyance factor, especially on the regional airports[70].

6.5.4 Summarising comments: airline crew

The airline crew, and principally the pilots, have been a much more visible group than many of the other groups profoundly affected by the security regulation. In Norway this has especially been a recurrent issue at the regional airports. Media coverage has documented conflicts at the airports, and newspaper articles report about pilots who miss their flight time and where the flights consequently were cancelled, because the pilot got stuck in the security control on his way back from the bathroom. In many ways, it demonstrates an additional side of the consequences of implementing a unified regulation regardless of the airport size, particularly where airports and procedures were not constructed to cope with the new security regulation and where practices bear the evidence of this.

The second point conveyed by airline crews was their perception of inconsistencies in the practice of the security regulation. Inconsistencies resulted in inconvenience for them, since what was regarded as acceptable at some places was considered unacceptable at others. These inconsistencies were, according to the crews I interviewed, found both within Norway and between other countries, with some countries considered more lenient than others. This results in an interesting observation, namely that there were differences in how the regulation was practiced, even though the regulation was supposed to counter variable practices through the level of details employed.

The last part of this chapter reviews the main findings from this chapter.

6.6 Concluding summary

This chapter has provided a comprehensive account of the regulatory transition and its consequences at three different airports. I have presented data that elaborate the experience of leaders and employees operating with, and according to, Regulation 2320/2002. I have also included the transition as

[70] For further elaboration on this ongoing conflict between security regulation and safe practices for pilots, see Pettersen and Bjørnskau 2011.

seen through the airline crews' perspectives. In this final section, I summarise the empirical material presented in this chapter in relation to the two last empirical questions posed in the introduction. The two questions are intertwined, especially since challenges caused by the regulation to a large extent are connected to the size of the airports. Therefore, the questions are not answered separately, but summarised through three sub-sections. I begin by looking at the regulatory transition and its consequences for the different airports.

6.6.1 Transition and adaptation

The introduction of the new security regulation was followed by great changes in the organisation of security at the airports. As described by informants at both Sola and Fjellvik, the level of details and detailed procedures greatly increased with the implementation of the new regulation. Simultaneous with the regulation's implementation, a new division occurred between safety and security as separate areas. As described by the Chief of Security (CoS) at Sola, there had not been such a clear division between the two areas prior to the security regulation's implementation. The first task given to the Security Department at Sola in the transitional phases was to adapt the new Regulation 2320/2002 into a local regulation that would specify all security procedures in detail. According to the CoS, the evaluation they received on this attempt was what he described as a 'slaughtering', and the CAA did not accepted it. To the CoS, this illustrated how unfamiliar they were with this approach of prescribing and specifying even the smallest detail and that they had not fully understood the level of detail they were supposed to include. After this, they realised that they had to think about security in a very new way.

The transition at Fjellvik was described similarly to the transition at Sola. However, in Fjellvik it may be possible that some of the changes the employees experienced at the airport were caused by the restructuring project Take-Off '05, especially since the time period coincided between Take-Off '05 and the full implementation of the security regulation on regional airports. For instance, the centralisation of the regional Avinor offices to Bjørvika, Oslo, could typically be seen as a change caused by economic downsizing. With this being said, the point that the leaders at Fjellvik made was to describe a new situation where they suddenly perceived they had less

autonomy and that decisions were made without their participation. This seemed to have left them with the impression that they had been deprived of some of the self-governance they previously had regarding security questions and that their local expertise and skills were no longer taken into consideration to the same degree.

At OSL, however, these problems were not presented as an issue. This stemmed, in all probability, from the fact that there had not been a transition there in the same proportion as the other airports had experienced. From its opening in 1999, OSL was designed as a hub that received 'unclean' passengers from the other airports, and that were consecutively security screened before being sent out to the rest of the world. Thus, their security system was already in place and operating, and, therefore, they did not have the same pronounced transition as the other two airports had.

6.6.2 Size matters

Implementing a regulation that had been prepared primarily for the large airports had consequences in its accomplishment in the practical context. To compensate for lacking structures and/or infrastructure, the smaller airports, which in practice included all airports except OSL, had to make amendments in order to fulfil the demands in the regulation. The barracks at Sola illustrate such an amendment. Since the barracks had already been approved as a solution, first by the Civil Aviation Authority (CAA) and later by the EFTA Surveillance Agency (ESA), Avinor, as the airport operator and facilitator, therefore had little possibility to find alternatives that would have been more suitable in the local context. Resources were, to a large extent, ear-marked or bound up and the airport, therefore, could not reconstruct the barracks without external funding from the outside (primarily through the state budget). This became difficult to accomplish, since there had been no remarks from either the CAA or the ESA as inspectorates. Leaders from Securitas and the handling companies received complaints from their employees about the barracks that they presented to Avinor. Avinor, although accepting and understanding the complaints, did not have the resources or mandate to accommodate them. Thus, the barracks appears as an example of a situation difficult to amend that few (besides the authorities) perceived to be satisfactory. It was hard for the leaders of all the companies to realise that they were unable to motivate their employees to do their jobs, when the

employees felt that they worked in situations that seemed meaningless or unnecessary. The employees were not opposed to the screening per se, only to those screening procedures they perceived to have no real purpose.

Another consequence of the security regulation was that the airport employees perceived that the tasks imposed upon them tied them into a fixed prioritisation. This seemed to result in larger consequences the smaller the airport was, because, as we saw in Fjellvik, the leaders there perceived they were restrained by the number of bureaucratic duties they were obliged to perform. The predefined procedures in the regulation resulted in decreasing the possibilities for prioritisation of time, personnel and resources. This particularly made the leaders feel that much of their time and effort was caught up in the security bureaucracy, instead of focusing on the general safety of the airport (including security). For a small airport in a remote location where they knew most of their passengers, it seemed inappropriate to apply security measures intended to reveal and avoid terrorist acts, such as the 9/11 attacks. Although it made sense in relation to the principle of One-Stop Security, where threats travel within the system, it seemed difficult to accept that they should spend such a large portion of their time and effort to secure against risks that seemed irrelevant to them, while the risks they perceived as more 'real', most often safety risks, were not necessarily prioritised as high as the airport employees felt they should be. Instead, they were often overshadowed by security regulations and bureaucracy. Operating an airport in tough climatic environments also led to different challenges than the other airports had, and their main focus was to get the aircraft up and down from the sky safely, but *these were safety, not security, issues*. In such scenarios, the risks and threats the security regulation was intended for seemed somewhat misplaced, and the amount of work they were obliged to do according to this regulation seemed, therefore, also to be misplaced.

6.6.3 Safety and security

The 'separation' of safety and security that occurred with the implementation of the new regulation made the contrast between them very large; whereas it was possible to make local assessments and apply for alternative solutions within safety, this had become very difficult within the security environment. This also entailed that it would not be possible to reallocate resources as the airport found it appropriate; rather, resources were

placed in predefined areas. The new way of organising aviation security was in many ways perceived to happen over the heads of the airports and their management and was only to be implemented as instructed. At the employee level, some of the implemented measures were perceived as inconsistent, unnecessary and/or superficial.

The difference in how safety and security were handled after the new regulation was implemented was exemplified by the CoS at Sola through the example of alternative solutions in relation to the 'runway case'. What he especially highlighted was that they were able to adapt the new demands based on risk assessments, thus reducing costs and make the regulation more appropriate in the actual context. As the CoS stated, this would not happen within security, because it was not possible to apply assessments in security as they did within safety. This meant that the leverage was very different in safety and security, since security regulation was only to be implemented. Although the barracks could be perceived as an amendment of the regulation, it was not based on any local risk assessments. The barracks were constructed with consideration to the screening levels given in the regulation. How this amendment worked in practice, its consequences for the employees in the context, or whether it was appropriate or not, was not assessed.

In the two preceding chapters, I have thoroughly explored the regulatory transition post 9/11. By including both the authority level and the airport level, my aim has been to provide as broad a picture as possible of the regulatory change and implementation processes in the Norwegian civil aviation system.

To summarise, the implementation of a unified security regulation in the Norwegian setting has had consequences. Many of the challenges caused by these consequences seem to be related to the rigidity in the construction of the regulation, which again is connected to the fact that the regulation was not constructed with respect to the difficulty the smaller airports would have in implementing this.

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7 EMPIRICAL FINDINGS AND DISCUSSION

The major empirical contribution of this study is the profound description of the transition of the regulatory system for civil aviation security in Norway, including the impacts and consequences of the implementation on different levels. Applying an integrated approach to this study has made it possible to gain a more comprehensive picture of the implementation than if a more 'pure' ethnographic, sociologic or political scientist approach had been applied. The major advantage of this approach is that it includes data from several levels of the civil aviation system, lest that implementation strategy and processes at governmental and authority levels can be seen in light of how it is perceived in practice by the 'end-users' where the regulation is implemented within a context. The study, however, has never intended to assess the security measures in themselves but rather to identify and describe consequences of the implemented measures and to abstract from this a discussion of what regulatory choices may look like in a context and what they may entail. The integrated approach also includes the application of typical political science literature on the subject of regulation and to apply organisational safety literature to the security field. This was done to acquire a wider picture of the constraints and possibilities of regulation when applied in the organisational setting and to shed light on alternatives to the regulatory choices Norway made after 9/11.

In the Introduction, I illustrated how uncertainty-induced the field of security is and therefore why it is so difficult to assess. In a setting where the absence of incidents cannot be ascribed to the success of the security system alone, I suggested that a way around this issue was to focus on the processes leading to high reliability. In this setting, where it is difficult to assess the success, one can look to the exploitation of the possibilities within the organisational setting that leads to high(er) reliability.

This chapter is directed at assembling the different parts of the thesis to present the findings that have been elucidated through the four empirical questions and to discuss these findings within the frames of the literature of regulation and organisation presented in Chapter 3. I have therefore divided the chapter into two main parts. The first part is dedicated to the empirical findings through answering the four empirical questions. This section will

form the basis for the subsequent discussion part of the chapter, which discusses the consequences and implications of the findings in relation to the theory and literature presented in Chapter 3. In the final part of the chapter, I address the research problem and draw some general lines, including recent developments within aviation security, to nuance and situate the findings from this study.

7.1 Addressing the empirical findings

The empirical questions first introduced in Chapter 1 have provided a way to approach the comprehensive field of this thesis, breaking it down to describable and analysable parts that offer the necessary information for answering the general problem of the thesis. The empirical questions have also guided the two empirical chapters and are now drawn in again to be answered. This section will summarise and accentuate the findings from the two empirical chapters and provide a basis for the subsequent discussions. The questions will be answered separately.

7.1.1 Empirical question 1

How was the security system for civil aviation transformed after 9/11 from a Norwegian perspective?

The transformation of the security system was based on a change in regulatory style. The regulatory transformation was not an exchange of one type of regulation with another but rather an *escalation* of one type of regulation over another during which an intensification of prescriptive regulation took place. Use the pictorial illustration of a volume control. We can say that there was a security system for civil aviation prior to 9/11 but it was on a low volume. After 9/11, however, the volume was turned up (close) to maximum, engaging all procedures and possibilities that already lay within the system. In the continuance of this escalation, new rules and regulations were added progressively on top of the existing ones.

After 9/11, the European Union, which from the outset had a function as a politico-economic union (European Union, 2015), gained a function as a legislative body for aviation security. Although the regulatory transformative processes in the EU were obligating the EU member countries to implement the new regulatory system, we find a similar process in Norway. The

differences we find in the implementation have to do with Norway being an EFTA member and not an EU member, which caused the processes of regulatory development and implementation to, among other things, be more time consuming. Hence, although Norway is not an EU member, the EFTA membership with the EEA Agreement obliges Norway in practice to follow the EU regulation for civil aviation security in line with the EU countries.

7.1.2 Empirical question 2

How was the transformation perceived by different agents within the civil aviation security system?

This question is best answered by separating between, first, describing the transformational process and, second, presenting the different agents' hindsight reflections on this transformation. This becomes more clarifying since, if we first look at the transformation itself, the different agents in this study described it similarly. The agents' reflections on the transformation in retrospect, however, were more disparate. We begin with describing the transformation.

Describing the transformation

The transformative process was identified mainly through the words *secrecy*, *rapidity* and *reactivity*, which will principally be used as collective terms to organise the agents' descriptions.

Secrecy

Secrecy described the increase of the level of secrecy that followed in the wake of the new regulation. This increase had consequences for the distribution of information and involvement within the system. The increase of secrecy was displayed both for the passengers and for agents and groups within or connected to the aviation system. Passengers were met with more restrictions and longer lists of prohibited items (and even the list of items was classified for some time). Groups that would previously have been involved in the preparation and development of regulations were now left out.

Rapidity

Rapidity described the time span between an event and the implementation of the new regulations. The rapid way regulations after 9/11 were implemented had consequences for the involvement and evaluation of the regulations: the quicker the implementation, the fewer the possibilities to take part in and contribute to the developmental phases of regulatory work. We see here that both the secrecy and the rapidity traits, to some extent, preclude involvement. A rapid way of developing and implementing regulation also precludes profound testing and evaluation of the regulations. This is also closely connected to the reactivity trait as described by the agents.

Reactivity

The reactive way of constructing regulation is closely connected to traditional accident prevention found in safety industries. Within accident prevention, rules and procedures are constructed based on past events. However, in order to make sure these procedures are fit and appropriate, the processes are long and time consuming, and testing and evaluating are essential. Within security regulation, the reactive way of constructing regulation has been copied without including the time and testing that ordinarily follow it. Thus, it has only been a partial transfer of this approach, and it is reasonable to assume that without the time and testing, procedures and regulations may, to some extent, become unfitted and/or maladjusted.

Describing the transformation through the words *secrecy*, *rapidity* and *reactivity* is not to say that these elements were not present prior to 9/11, but if we also apply the illustration of the volume control, we see that the volume has been turned up on all these traits and that this increase has led to various consequences within the civil aviation security system. These consequences can mainly be found in the degree of involvement and participation as well as possibilities for contextual adaptation.

If we leave the three descriptive words characterising the transformation for a moment, there is a last change that is significant for the Norwegian system: the moving of regulatory processes from the national to the international arena of the EU. Regardless of the perceptions of this move, it is clear that it has also had effects on involvement and participation. Accordingly, we cannot say that only the properties of the regulation affect the level of involvement in regulatory processes since this can also be

explained by the relocation of where the regulatory work is done. The mere fact that the Norwegian Aviation Act declares that all regulation that is found relevant to the EEA Agreement takes precedence over Norwegian law illustrates that national law, and hence national legislation regarding procedures of developing and implementing laws and regulations (through the Public Administration Act[71]), are overridden because of the EFTA membership when it comes to security. The Public Administration Act (and the Freedom of Information Act[72]) are made to ensure that processes of regulatory work are open to affected parties and that the processes are to take due time to ensure that all parties are given time to contribute. The aim here is not to conclude that this change indicates that regulatory development is undemocratic since the processes of the EU ensures affected member countries and Norway involvement. However, by moving these processes out of the national context and to the international level, it is reasonable to assume that there will be different groups that are involved in the EU than if the processes were kept nationally. To some extent, this relocation may therefore lead to lesser degrees of democratic involvement than there was before in the national context. If we then combine the relocation of regulatory development together with the boost of the volume on secrecy, rapidity and reactivity, we see that the consequences are mainly oriented around involvement, participation and possibilities for adaptation of the regulations. We can therefore say that these are the main consequences of the regulatory transformation.

The transformation in retrospect

The transformation of the security system, or rather the effects or consequences it has had, was perceived differently by different agents within the aviation system. The assessments made by the Civil Aviation Authority and the management of Avinor were not alike, while those of the Ministry of Transport and Communication (MTC) and the Civil Aviation Authority (CAA) approached one another. The MTC informant emphasised the importance of being part of the European system for civil aviation security,

[71] See Section 2.4.2.

[72] A law to ensure transparency in public administration, among other things safeguarding democratic principles and the rule of law.

while simultaneously observing that the level of secrecy had consequences for involvement and participation in the Norwegian context. She even said that she did not see those processes as very democratic. Notwithstanding, it was most important for the MTC to be part of the EU regulatory system and not to be left outside. Exactly *why* this was so important was unfortunately not directly expressed by the MTC informant, except through referrals to the National Strategy Group, where the decision to keep in line with the EU was presented as a settled political strategic decision. However, since the MTC is a political body, it is the Civil Aviation Authority that works directly with recommendations on behalf of the aviation system regarding Norwegian aviation. This way, even though the regulations are owned by the MTC and the MTC is an active agent in regulatory development in the EU, it is the CAA that makes assessments and recommendations to the MTC in questions regarding Norwegian civil aviation. Because of this allocation of duty and responsibility, one can expect that the decision to follow the EU is a political decision and that it is the CAA that provides the recommendations from the practical aviation setting to the MTC. Therefore, we can look to the CAA and its assessment of the regulation in hindsight because it is the authority that mainly provides the foundation for the MTC's strategic approach.

The CAA

The CAA informants in the Security Department expressed satisfaction with the implementation of the regulation and the large improvements it had advanced for the aviation security system in Norway. The Kato Air incident, in their view, supported and justified the need Norway had for a security system equivalent to the EU system. It was clear that there was no desire for a partially implemented system, as Iceland had accomplished. This was elaborated through the assumption that an event corresponding to the Kato Air incident would lead to different assessments in Iceland as well. The significance of the Kato Air incident formed a basis for the expressed need Norway had for a system like the EU security system. The CAA was not inclined to move in the direction of leniency but rather toward a more conservative course, as exemplified through the case 'Of exceptions for small airports/aircraft' (5.5.2).

Avinor

The informants from Avinor concurred with the view that the security system had improved considerably since the implementation of the 2320/2002 regulation. Like the CAA, the CEO of Avinor emphasised the need for security measures and based this on referral to incidents, both known and unknown to the public, directly threatening Norwegian aviation. Hence, in his view, the continuing threats to civil aviation justified a security system comprehensive enough to reveal those intentional threats. His first major question, however, was whether the current security system was appropriate to the type of threats Norwegian civil aviation faced. It is clear that 2320/2002 was mainly constructed for threats in the same category as 9/11 and not threats similar to the Kato Air incident. To apply the category from the Icelandic Civil Aviation Administration, these latter threats were not terrorist threats but rather threats caused by mentally unstable persons. However, the security system may intercept intentional actions pertaining to both categories; thus, the question of appropriateness does not treat questions regarding whether the system is wrongly implemented but rather more in relation to the economy (can we justify the expenditures of such a system with the threat levels we are faced with) and that of autonomy, to be *sui juris* ('Decide in one's own house'), in which regulatory decisions, to some extent, are nationally maintained. Continuing the line of thought regarding appropriateness, we see that the New Zealand Blenheim case demonstrates an assessment contradicting the Norwegian CAA's assessment. In contrast to Norway, New Zealand decided that the implementation of a security system à la the EU system was disproportionate in relation to the type of threats they were faced with. Secondly, Iceland demonstrated a different assessment in which autonomy is more important than implementing an EU system nationally.

The second major question that the informants from Avinor posed was about the way the regulation was constructed. This follows the point from above about the reactive way of regulating and the partial transfer of the principles from traditional accident prevention. In addition, the Chief of Security at Avinor described the regulatory system as 'casuistic'; an expression that implies that one bases rules on a particular instance, which may cause deceptive and unsound reasoning. The Avinor informants recognised the necessity of both an improved security system and the

exigency of taking immediate action after a groundbreaking event such as the 9/11 event. They did, however, simultaneously pose questions reflecting expected consequences of the regulatory type that was chosen.

7.1.3 Empirical question 3

What challenges caused by the security regulations were described by people working at the selected airports?

Direct challenges caused by the regulation were closely linked to the rigour of the regulation, which increased massively after 9/11. The increase of detailed descriptions of procedures and the increased frequency and extent of security procedures together formed a different reality in which all airport employees, regardless of level (both leaders and employees), had to operate. Within this reality there was much less possibility to influence and/or participate and to adapt the regulations contextually. To a large extent, the constraints in the system affected both leaders and regular employees similarly in that their space for action (see Figure 2, p. 45) became diminished. Their role toward the regulation, however, was not the same. Leaders were in a compound pressure situation between their employees on the one hand and the obligations they had from above on the other. As airport operator, Avinor was obligated to implement the regulation as prescribed, and this would be controlled by the CAA through inspections. Securitas and the handling companies were in a similar position in which they, as contracted companies, were obligated to perform their services according to the contracts and regulations framing their work. Simultaneously, the leaders experienced pressure from below since employees expressed challenges connected to their practical work within the regulatory reality. However, the leaders had few, if any, possibilities to facilitate and/or to adapt the procedures to meet the employees' requests and complaints. This again caused frustration among the leaders because they were bound by the strings of the system, and some expressed that this hindered them in performing good leadership. This situation also demonstrated the disqualification within the rigorous prescriptive system since such systems are designed to ensure unified performance within the system. Local expertise (typically concerning conditions as building architecture, climate and employees) and professional expertise that people working within a trade for many years accumulate could,

to a lesser degree, be applied and utilised since possibilities for participation and adaptation was limited.

Employees, on their side, expressed frustration over cumbersome, incomprehensible and, to some extent, seemingly unnecessary procedures. They experienced the lack of facilitation by their leaders as needs not being met, which again gave them a perception of unimportance. Working in a very static way to do the procedures that seemed superficial and maladjusted resulted in, as many of the informants reported, employees' tuning out in different ways, meaning that they changed into auto-mode, just doing their job and not thinking, reflecting or evaluating. I do not claim that this was done by all employees within the groups included in this study, but these perceptions were expressed by a majority of the informants working at the front line. The largest difference was how profoundly they expressed that they were affected by it. Some expressed that it would be difficult to work for a long time in such an environment, while others seemed to accept it more easily. Regardless of their acceptance of this reality, it was clear that the environment in which these employees were doing their jobs caused them to play down their independent, reflective and assessing sides as a coping strategy in a reality that requested neither.

7.1.4 Empirical question 4

What are the consequences attached to implementing a common security regulation, regardless of airport size?

Regulation 2320/2002 was designed to withstand intentional attacks to which large European airports are vulnerable. The Norwegian government's decision that the EU regulation should be implemented on all Norwegian airports required that it be translated into the Norwegian aviation system, where the majority of airports are small on the European scale. This becomes articulated when OSL is compared to Sola and Fjellvik airports. OSL, as a definitive large airport relative to other European airports, operated in a different realm than any of the other Norwegian airports. This becomes clearer when looking at the reported challenges from Sola airport. Sola was, in the Norwegian setting, defined as a large airport together with four other airports.[73] Sola, albeit a large airport, had similar challenges to Fjellvik,

[73] In 2010

connected to the lack of possibilities to adapt the regulation contextually. Since Fjellvik is one of the smallest Norwegian airports and Sola is one of the largest, it is reasonable to assume that the challenges will most likely be found in most Norwegian airports and that they are caused by implementing a regulation designed for large European airports.

If we consider OSL to hold a unique position in the Norwegian context, where the airport is designed in a way able to handle the regulation, we can instead put focus on Sola and Fjellvik; both reported challenges caused by the implementation of the regulation, which we can ascribe to the size variable. Some of the reported challenges from the two airports are quite similar, and most concern the reports on implemented procedures that seemed strange, ill-fitted, etc., when put in practice. However, a large difference between the airports was in the proportion of work *with* the regulation, mainly in meeting the demands of the regulation through writing the local regulation and to fulfil the requirements regarding the physical environment of the airport. This difference can be illustrated with a linear graph in where the portion of the employees' workload used on regulatory work increases the smaller the airport is. For the smallest airport in this study, Fjellvik, this large proportion of administrative work was considered to be restrictive and was also considered to consume a disproportionate share of people's time. This again was combined with a perception of the work as, to some extent, excessive and superfluous, ending in an impression that effort was misapplied in the context.

So far in this chapter, we have focused on the empirical findings. Now, it is time to change focus from the practicalities of the regulatory change to a discussion of the consequences and implications these findings have shown through the literature and theory presented in Chapter 3. The discussion is divided into two sections, regulation and organisation, and in the final part of the chapter, the inner coherence between the two parts is discussed.

7.2 Discussion: Regulation

7.2.1 Iceland and Norway – Representing different choices

One of the premises I have worked out from in this study is that it is not only useful but also necessary to see the organisation of security in relation to

the regulation that frames it. I have contrasted the regulatory system prior to and post 9/11 because it elucidates regulatory types and their development. I have chosen to contrast prescriptive regulation with performance-based regulation, although they are presented as 'ideal' types of regulation where 'real' regulation is found somewhere between the two. The focus of this thesis has been on the Norwegian national processes. The four empirical questions have been applied to extract a profound account of the regulatory transition both on the authority and organisational levels. Hence, this thesis answers questions regarding the transition from a Norwegian perspective and how it has been translated into the Norwegian aviation reality. However, including a contrasting case, as I have done with the Icelandic implementation provides a possibility to see the Norwegian implementation in a wider context in which the Norwegian and Icelandic implementations represent different ways of handling aviation security nationally and also in relation to a supranational regulator, as the European Union is. Here, it is beneficial to see it through the lens of regulation since the different implementations ultimately contain different regulatory strategies and preferences. In the following section, the regulatory choices of Norway and Iceland will be contrasted and discussed.

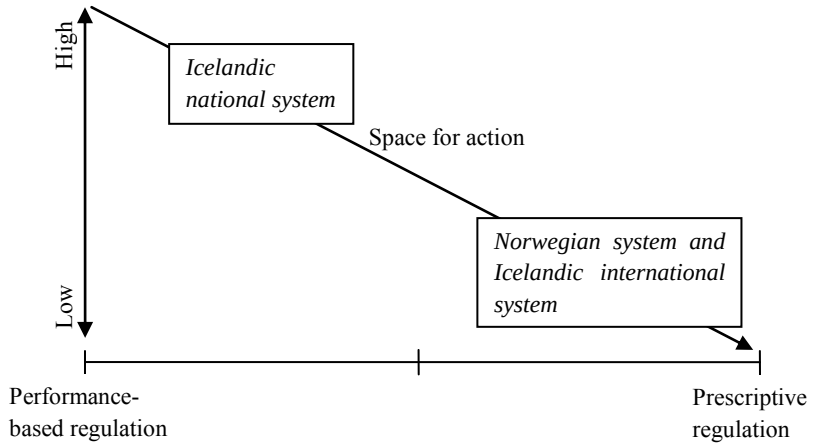
7.2.1.1 Performance-based and prescriptive regulation in context

In this thesis, performance-based regulation and prescriptive regulation have been applied, representing two opposite sides of a continuum that balances the space for action for the regulatee. I have applied performance-based regulation as a collective term that includes the types of regulation that regulate for goals or results to be achieved (goal-based) and/or basing these on risk assessments based on evidence (risk-based) (Peterson & Fensling, 2011). What is common for all of these types of regulation is that they have grown, in response to prescriptive regulation, as alternatives to the type of regulating that leans on command and control, and have moved to a focus on reaching a decided goal (or goals). From there, resources are placed where they are proved to be most beneficial.

In this thesis, the Norwegian implementation has represented the prescriptive regulatory type, and the Icelandic national system has represented the performance-based type of regulation. This gives insights into regulation in practice in a setting where the point of departure for the two countries has

been similar. It also accentuates the boundaries and possibilities these regulatory choices generate.

Figure 3: Space for Action - modified



The figure above (first presented in Chapter 3), which has been modified to include an indicating placement of the regulatory implementations, illustrates where Norway's and Iceland's implementations can be placed. As opposed to Norway, Iceland chose to have two regulatory systems: national and international. We can therefore see that the national implementation can be placed quite high in the figure, hence providing relatively large possibilities of space for action. The implementation of the international system is, however, placed together with the Norwegian system, where the space for action is low. But what does that mean? What consequences does this difference in space for action have for the aviation security system and the authorities that administer it? For Iceland, the exemption they had in the national system rendered possible to 'decide in one's own house', as expressed by the Head of Security (HoS) at the Icelandic Civil Aviation

Administration, meaning that they were able to perform their own risk assessments and apply measures based on these assessments. This had two main effects: first, they were able to address risks specific to the setting(s), applying resources where they would be most beneficial. Second, safety and security issues were not that clearly demarcated. I will elaborate on these two points next.

The Head of Security (HoS) at the Icelandic Civil Aviation Administration stated that the exemption they had in the national aviation system for security had benefits both from a cost/benefit perspective and from an autonomy perspective. If Iceland were to accommodate the EU regulation at all airports, it would demand great costs that were not considered appropriate to their assessed risk level. But having the exemption did not imply that there were no security measures. The HoS explained that there had been performed risk assessments by the Icelandic police, and the measures were implemented on national flights. The measures included doing background checks on people working at the airports, controlling boarding passes with IDs and baggage reconciliation. These measures were found appropriate for the Icelandic context, but as the HoS pointed out, in comparison to the EU regulation, the Icelandic security measures would be considered obsolete. She pointed out that, regarding the risk of terror in Iceland, the aviation authorities did not see that this was something very relevant in the Icelandic context. She did see, however, that mentally disturbed persons (which were the cases in both the Kato Air incident and the Blenheim incident) were a threat to aviation in every country, regardless of size, Iceland included. But this possible threat did not sway Iceland to give up the autonomy it had obtained with the national system.

Because the risk assessments regarding possibilities for terrorist acts were deemed low, a measure such as baggage screening could be considered unnecessary in the Icelandic national system. However, because of the large number of air passengers bringing with them gas cylinders for cooking, baggage screening was necessary to remove these cylinders from the baggage (see Section 5.3.1). But removing them was considered a safety issue, not a security issue. Baggage screening in the national system was therefore a measure with more than one function since it can be considered to be both a safety and a security measure, but for the HoS, this measure was purported as a safety measure based on local risk assessments, which were context-specific

for Iceland with its large number of hiking tourists. Other security measures, such as security controls of passengers and staff, were not implemented. Through this example, we can see how the space for action may be expressed in a practical setting.

The Norwegian regulatory implementation of security measures represents the prescriptive regulatory type in which there has been a complete implementation of the EU regulation in all airports. It is evident that the Kato Air incident became significant in the Norwegian setting since it placed focus on the possible effects of having more lenient security measures at smaller airports. This was also clear in how the incident was applied as a justification for the complete implementation, especially by the Civil Aviation Authority.

Hence, we see that the largest difference between Iceland and Norway was that the national security system for civil aviation in Iceland was based on local risk assessments. It thus follows a performance-based regulatory type based on local risk assessments in the national system and the EU prescriptive regulatory system in the international system. Conversely, Norway chose to implement the prescriptive EU regulation at all airports, whether they had only national or both national and international flights. The statements from the Icelandic CAA underscored the general benefits for performance-based systems: the possibility to have autonomy in implementing what it considered to be reasonable measures in accordance with an assessed threat level, thus focusing on achieving a desired goal and setting the frames to achieve this goal contextually. The Icelandic authorities did recognise that they had a small, transparent system, especially compared to the rest of Europe. Therefore, to implement a security system that was mainly constructed and intended for large European airports was not considered to be reasonable, necessary or appropriate in the context of the Icelandic national aviation system. That being said, the Icelandic CAA explicitly stated that this applied only to its national system and not to its international system. Keflavik airport, which handled international flights to the rest of Europe, was strictly operated according to the EU regulation. This was based on the fact that risks travel within the One-Stop Security system, so local risk assessments would not be valid in that setting.

Although the Norwegian Civil Aviation Authority, according to the interviews, assumed that the Icelandic system would change if it were to experience an incident such as the Kato Air incident, the Blenheim case

suggests that there can be alternative conceptions to this assumption. Although New Zealand is not subject to the same regulatory realm as Norway and Iceland, the Blenheim incident initiated national discussions of whether to implement a security system in line with the other OECD countries[74] (where EU members make up a large percentage). The Norwegian Civil Aviation Authority was also approached and consulted in this process due to its experience with the Kato Air incident. The conclusion of the New Zealand government was, however, to implement more security measures directly aimed at these threats but not to implement complete security measures on their national system as it had on its international system. These threats were considered to be rare, so the cost of implementing such extensive measures was considered to be unjustified. Hence, a more performance-based approach was applied based on national risk assessments.

Ultimately, the strategic choice of choosing a regulatory approach is going to be a choice over trade-offs. The choices will be based on what is perceived to be most important or valuable. Typical benefits of prescriptive regulation are that it is easier to inspect and correct, to have oversight and to control. In addition, in a large system, such as the EU regulatory system for civil aviation security, it may be considered valuable to take part in the expertise that comes from centralising competence. It is also difficult to dismiss the issue of liability. To apply a hypothetical case, if a terrorist incident were to happen in Iceland, which somehow translated or transported into the European aviation system, it would be hard for Iceland to disown liability. However, for the countries following the EU regulation, liability would have to be placed on the system as long as the airport or the country has fulfilled the obligations of the regulation. This way, compliance may seem a safer path than, as the Head of Security at the Icelandic CAA called it, to 'decide in one's own house' when it comes to the issue of liability.

In the Icelandic case, the authorities were very clear on their motivation and assessment behind choosing the regulatory solution they had chosen. The autonomy that laid in the exemption they had obtained for the national system was held as very valuable to them and not something they would easily give up, to the extent that, if an incident like the Kato Air case were to happen, it was assumed that they would maintain the exemption. For Norway, the

[74] See Section 2.2.

principle of One-Stop Security would not have been possible to accomplish if Norway had attempted an exemption like Iceland had. Based on the interviews with Avinor and the Civil Aviation Authority (CAA), to be part of the One-Stop Security system was considered important. Secondly, using the statements from the CAA as a basis for the second argument, we see that security was defined as a service to the passengers. Thus, the discussion turns into an argument over who should have access to this security service. When defined this way, security is understood as a right every passenger has when using commercial aviation. Thirdly, the Kato Air incident has been applied as a symbol for the need for security measures at the regional airports also. The example from the New Zealand case may, however, propose that this could be assessed differently, hence suggesting that the EU system may not be appropriate to handle those kinds of risks – in other words, seeing the implementation of such an extensive regulation as 'using a sledgehammer to crack a nut'. This is also supported by statements from the informants in Avinor, who questioned the appropriateness of applying the EU system for the type of threats Norway was most vulnerable to. However, there is little doubt that, by implementing the EU regulation, one addresses both types of threats.

Leaving aside the reasoning behind choosing one regulatory strategy over another, this study has aimed to explore the consequences of the chosen regulatory system for aviation security in the Norwegian context. In the next part of this chapter, we shift from the national strategies of regulation to the level of regulation in the organisational setting.

7.3 Discussion: Organising Security

At the beginning of this chapter, the four empirical questions were answered. In the previous part of the chapter, the main focus has been on the regulatory choices and implementation styles of civil aviation security regulation, and Norway and Iceland were contrasted. The discussion of regulatory strategies has been founded on the findings described through the first and second empirical questions and has mainly concerned the national administrative levels. The objective has been to describe and discuss the strategic choices, or national strategies, in the regulatory realm and pave the way for a discussion of the consequences and implication these choices may have. The aim for the following part of the chapter is to discuss the main

consequences and implications these choices may have in the organisational setting.

It is clear that the security regulation implemented after 9/11 has had consequences at the organisational level of the airport. Through empirical questions 3 and 4, we established that the consequences of the regulatory implementation found at the airports were mainly caused by

- The construction of the regulation, which inhibited participation and adaptation at the airport level.
- The implementation of a regulation intended for large airports on small airports with limited possibilities for adapting it into the context.

Seeing this in relation to Figure 2 on page 45, we see that, with the increase of prescription, there was a simultaneous decrease in space for action. *Action* here refers to actors' possibilities for participation in the development of regulations and also having possibilities for adapting or modifying already established regulations. In addition, the security regulation that was primarily developed for large airports was implemented in all Norwegian airports practically unaltered. This resulted in an implementation that was described by the informants as somewhat 'ill-fitted'. This again had consequences for how employees experienced their jobs, the tasks they were doing, the significance (importance/unimportance) of their own qualifications and also the perception of the effects or the results of the jobs they performed.

If we follow the fundamental idea of the High Reliability Organisation theory, we see that issues such as the ones mentioned above are found to be essential in organisations striving toward high reliability. In line with the mindfulness perspective within HRO theory, organisations that successfully accommodate for cognitive infrastructures will have a higher degree of reliability than other organisations. In this thesis, I have applied Eede's definition of reliability: "Reliability is the system outcome that can be described as safe, effective and efficient, in terms of average and variance" (Eede, 2009, p. 5). By focusing on reliability, we can say that we focus on the outcome, or the 'end-product' of organisational activity. In the airport security setting, this end product is the securing of air travel from intentional attacks.

7.3.1 High Reliability Organisation theory (HRO theory)

Through the empirical material presented in this thesis, I have established that regulation for airport security has become more prescriptive and more detailed. In a prescriptive mentality, which builds upon the notion that procedures and rules lead to safer outcomes, more prescription will lead to more safety. As discussed in Chapter 3, prescription has clear advantages (and disadvantages), especially in industries where there is little or no room for error, where it needs to be right all the time. However, when it comes to types of organising, different choices will lead to different consequences and outcomes. Here, High Reliability Organisation theory (HRO theory) has provided insights into how organising may affect reliability. As elaborated in Chapter 3, HRO theory grew as an aspiration for the theorists to distinguish between normal organisations and organisations that "actively managed to control and reduce the risks of technical operations [...], [where] these organisations have not just failed to fail; they have actively managed to avoid failures in an environment rich with the potential for error"(Rochlin, 1993, p. 15). These organisations could demonstrate great safety records; therefore, it became compelling to find out what made these organisations able to do so. The HRO theorists did not claim to have found a recipe for success, but they were able to discern some properties from these organisations that seemed to enable them to perform highly reliably.

What is it that HRO theory can contribute to in the airport security setting? The HRO theory and mindfulness perspective brings insight into properties that enhances or diminishes high reliability, and it can therefore give insights to the way airport security is organised, including what one might 'miss out on' by organising it through highly prescriptive ways. It can also give an indication on whether the system constructed to bring security may have adverse effects on the product it intends to create, that is, on security itself.

7.3.2 Mindful organisations

As an explorative study, the empirical material was not predetermined to be interpreted and analysed through the lens of HRO theory. The material did, however, conclusively create a thorough account describing how it was perceived for different work groups to work within the security interface at the airport. Connecting this material with some of the main features of

mindfulness in high reliability organisations provides an opportunity to understand the significance of the findings from the airport in terms of reliability.

In Chapter 3, general lines were drawn on the development of HRO theory and how this resulted in, for the Michigan school, the contribution of the 'mindfulness' perspective. Their claim was that HROs are reliable because they are able to have a state of mindfulness (Eede, 2009). The mindfulness approach moved the focus away from theory of decision-making and accident prevention, which had been predominantly steered by technology-driven perspectives, and over to cognitive infrastructure. The cognitive infrastructure enables organisations to perform adaptive learning and leads to reliability. Clarifying cognitive processes that reaccomplish reliability in organisations will provide a mechanism in which reliable structures are accomplished. Weick explains that "this mechanism is often underdeveloped in non-HROs where people tend to focus on success rather than failure and efficiency rather than reliability" (Weick, et al., 1999, p. 82).

7.3.3 The five processes and their relation to action

In Chapter 3, a thorough description of the five processes was made. Here, I will summarise the main points before I connect them to the concept of action.

According to Weick et al. (1999), there have been detected five processes in successful HROs, which together form a state of mindfulness:

1. Preoccupation with failure
2. Reluctance to simplify
3. Sensitivity to operations
4. Commitment to resilience
5. Underspecification of structures

1. *Preoccupation with failure* is to worry: "Worries about failure are what give HROs much of their distinct quality" (Weick, et al., 1999, p. 92). Since failures are rare in HROs, learning from error is more difficult in well-functioning HROs. However, effective HROs turn every possibility, all and any failure and near failures into grounds for improvement (Weick, et al.,

1999). Combining this with encouraging the reporting of errors, even more opportunities for learning are generated.

2. *Reluctance to simplify* is about scepticism. In complex tasks, interpretations and simplifications are made. This is a way for anomalies to accumulate. In order to reduce complacency, which often follows the duplication of procedures and redundancy, scepticism may counteract this. "Concomitant with trust is the belief that all humans are fallible, and that sceptics improve reliability" (Weick, et al., 1999, p. 96).

3. Simplified, *sensitivity to operations* can be described as situational awareness. It is not only about being present in the moment but also about sharing this information and the interpretation with others. One of the main inhibitors of sensitivity to operations is production pressure or overload (Weick, et al., 1999).

4. Being *committed to resilience* is not only to being able to bounce back after incidents, in which HROs usually have few. It is also about being able to cope with unexpected surprises. It is a preparation and anticipation of inevitable surprises happening – in other words, to expect the unexpected.

5. The *underspecification of structures* underlines that orderliness may amplify errors. Weick et al. use the 'garbage can' structure (Cohen, March & Olsen, 1972) to illustrate this concept. In this structure, more hierarchical structures disappear: "In a garbage can, problems, solutions, decision makers and choice opportunities are independent streams flowing through the system" (Weick, et al., 1999, p. 104). HROs, this way, gain flexibility through enacting moments of 'organised anarchy' (Rasmussen & Batstone, 1989; Perrow, 1994b, p. 216; Vaughan, in Weick, et al., 1999). This means that, in problematic situations, decision-making follows the problem and not necessarily the decision-maker.

By accepting that mindfulness is essential for reliability, finding out what enhances or diminishes mindfulness will be imperative. Weick et al. argue that mindfulness and action are closely connected. If people have no possibility to act on what they consider to be hazards, a process of ignoring takes place: "[…] if people are blocked from acting on hazards, it is not long before their 'useless' observation of those hazards are also ignored and denied, and error accumulate unnoticed. The richness of a state of mindfulness is determined by the richness of the action repertoire" (Weick, et al., 1999, p. 90). Limited action and few possibilities for activating cognitive

processes result in a state of mindlessness or of situations where people act on 'autopilot'(Weick, et al., 1999). The rarer the cognitive processes are activated, the more a person moves over to autopilot.

Thus, the main necessity for Weick et al. in order to achieve mindful operations in the organisation is action, specifically, the action that facilitates the enactment of the five processes. As we have seen, especially through the empirical material of this thesis, action (or the restriction of it) has been the crux of the challenges connected to the security regulation. I will therefore apply examples from the empirical material connecting these to the cognitive processes of mindfulness. I will then discuss the implications this has.

7.3.4 The five processes at the airports

The limitation of the space for action that followed the implementation of the 2320/2002 regulation became contextually pronounced in several ways. In order to discuss how the five processes described by Weick et al. have been obstructed at the airports, I have applied a selection of examples from the empirical material divided into three sub-sections to demonstrate this. The first section discusses the negative perceptions that the employees had of the procedures they performed and how this resulted in them 'tuning out'. The second section looks at how learning and communication situations were not exploited, and the third section looks at how leaders experienced that they, to a lesser degree, were able to capitalise on their situational capabilities in security issues.

7.3.4.1 Negative perceptions among the employees

As described under empirical question 3, one of the main consequences of the implemented regulation at the airports was negative perceptions among the employees about the procedures they performed. This was particularly prominent in Section 6.2.5, where the barracks case was presented. Here, employees from both the security company and the handling companies expressed many negative perceptions connected to the security control that was performed there. There were several components of the work tasks and procedures that together formed a negative impression of both the work and the importance of the procedure itself. For instance, both the security guards and the handling agents had a clear understanding of why it was important to

have the barracks at the border of the Critically Security Restricted Area (CSRA). It was clear to them that all people, vehicles and cargo could be potential threats to the aircraft and that security screening before entering this area was an essential security measure. The design of the procedures, however, was very detailed and left little space for action. It was clear to the employees that the level of detail was there to ensure that the security screening was performed in a certain way to provide a high security level. Nonetheless, that the security guards did not have authority to, for example, check anything not described in the procedures created a negative perception of the procedures among the security guards. This was echoed on the other side by the ramp agents, who were the group mostly subjected to this control. The ramp agents perceived the control to be very predictable and superficial. One of the agents expressed, "If I wanted to bring something into CSRA, I would know how to do it" (6.2.5.2). The security control at the barracks therefore became something perceived to be also 'for show' besides being an actual security measure installed to hinder harmful objects and people from entering into CSRA. The measure had consequences regarding the perception the security guards had of their job and the procedures they performed, something that was also accentuated by corresponding opinions by the ramp agents.

Similarly, many of the security procedures were perceived to lack meaning. That the employees were not provided with the information about why they were to do as prescribed, which would perhaps ameliorate this, was expressed as a difficult point. Vidar, the security guard, outlined this by stating, "When something is new [procedure or regulation], there is put up a note on the wall in the break room. I often wonder why? Has anything happened in advance that cause these new rules? I think this is really interesting and it would provide meaning to us all" (6.2.5.1). This was also brought up by one of the leaders of the handling companies who explained that he found this situation difficult. It was hard to motivate employees to do the job according to the regulation when he was not able to even explain why they were to do as prescribed (6.2.2.3). These situations together led to employees tuning down their thinking, even to the extent described by Lena, who expressed, "The best thing is not to think. You're not paid to think, so I try the best I can to just do the job without thinking too much" (6.2.5.1). Lena perceived that the job did not request of her to think. To her, this resulted in

meaninglessness and something that she found difficult to cope with. Roy, the pensioned army professional, expressed almost the same as Lena, but he concluded in a more military fashion that the job was to do as told and not to ask questions. The effect, however, was still the same: thinking became downplayed.

In relation to the five processes of mindfulness, the way the procedures were performed and perceived led to employees tuning down their cognitive processes. Process number 2, 'reluctance to simplify', is a way to counteract complacency, according to Weick (1999), by being sceptic toward the notion that precautions are sufficient and a wariness of perceived competence of oneself and others. This scepticism counteracts socialisation into ignoring the same things and taken-for-granted notions. Process 3, 'sensitivity to operations', is about situational awareness, being present and being present together. The commitment to resilience (4) is to expect and predict that potential dangers are coming. All of these processes necessitate that there is space for these processes to take place. They are all about awareness, of being present, which is directly contrary to the situations described above. Instead, moving into autopilot mode and not thinking is described as a coping strategy. This follows what Weick describes will happen if there are limited possibilities for action and few possibilities for activating the cognitive processes. In summary, we see that the autopilot mode directly obstructs the awareness needed to facilitate and induce the processes leading to mindfulness as described by Weick.

7.3.4.2 Learning and reporting

Besides the awareness needed for facilitating mindfulness, we find the importance learning is given. The first process, 'preoccupation with failure', especially accentuates this. Since learning of errors in an environment that seeks to have none is difficult, the idea of preoccupation with failure is to make use of all situations that are available. This includes reporting since reporting situations also provide a potential for learning. To apply an empirical example, we can look to the situation in Section 6.2.4.1, where a handling agent discovered a cleaning lady outside on the airside without an ID card. The cleaning lady could be considered a possible threat since she was walking around on CSRA without identification. The handling agent reported her being there to the security company. When later reflecting about this

episode, he seemed to think that the situation had been handled poorly after he had reported it. He had not received any feedback after the situation, which could have affirmed that he had handled the situation correctly (which he did). He was not involved in the subsequent situation, besides the short report he gave to the security company, which would have followed the fifth process of mindfulness, 'underspecification of structures', and the situation was not brought up later, which could be exploited as a possibility for learning (following process 1, 'preoccupation with failure'). The handling agent also commented that he was not sure if he would report it next time because of the way the situation had been handled. There seemed to be a missing link between his training, where emphasis was put on being alert and reporting security breaches, and the real-life situation, which he perceived to not encourage reporting.

In the security control, some of the security guards reported variance in what we can label 'reporting climate'. This included how questions, reporting and communication were received by superiors in the security control, which was described as unpredictable and variable. This resulted in insecurity and sometimes hesitancy when it came to reporting since the reception of this could be very person-dependant. Some of the guards explained that they had been met with what they perceived to be a somewhat ridiculing attitude when asking questions. It was also indicated that this variety in communication led to some of the guards avoiding asking questions and, in cases of doubt, sometimes deliberately failing to notice things.[75] Since reporting lies at the core of process number one especially, we can say that the sometimes inconsistent reporting climate limits the full potential of process 1.

7.3.4.3 Situational capabilities

The leader level in Avinor, Securitas and the handling companies had been bereft a large portion of their space for action after the post-9/11 regulation. Where there previously had been more possibilities to apply situational capabilities, such as assessments, prioritising and adjustments, the leaders now perceived these possibilities as severely limited. In Section 6.2.1.1, the Chief of Security (CoS) at Sola described the Runway Strip Case as an

[75] There was never any indication that the security guards overlooked harmful objects or letting anything unscreened go past.

example that underscored how safety issues were much more subject to situational assessments and adaptations than security issues after 9/11. This meant in practice that, although leaders could see the benefits of adjusting security measures to fit more into a local context, it would be difficult to accomplish if it was a security issue. An apparent example was the barracks, which was always recurring as a quite poorly adapted measure. As long as the authorities (through the CAA and the ESA) found it to be satisfactory, it did not matter whether the leaders at the airport found alternatives that would fit better contextually. This became pronounced in such arenas as the Security Network Group meeting at Sola (6.2.5.3). Here, the leaders of Avinor, Securitas and the handling companies were able to do risk assessments of issues threatening punctuality. When it came to security measures, however, they had no legal authority to make any changes. Although issues concerning security were recurring, such as the barracks, they could only note them as concerns. The level of constraint was perceived as frustrating for the leaders. The CoS expressed this by asking rhetorically, "Can we do anything else than follow the book? No. When someone has told us that this is how we should do things, we have no real option to do things otherwise".

The possibilities to apply expertise in, for example, prioritising the application of resources were also limited. An example of this was how the CoS wanted to have more frequent background checks of the employees than what the CAA required (6.2.1.1). He recognised that the long time between each background check made it possible for employees to obtain a criminal record and still work with security at the airport. Since security resources were earmarked, the CoS had no possibility to find resources to implement a more frequent background check of the employees.

In the small airport of Fjellvik (6.3.4), we could also see that the constraints of the security regulation had consequences for how the employees could distribute time and attention to other issues. Here, the intersecting point of safety and security appeared more clearly since the smaller the airport was, the more intertwined safety and security issues were. The main cause was the fact that, in airports with fewer employees, all working tasks were distributed among few people, while, in larger airports with more employees, people's work was more specialised. Since the smaller airports, in practice, had to implement the same measures as the larger airports, much of the time and attention were tied up due to the demands of the regulation. In addition, they

had to accomplish a much larger amount of administrative work than they previously had (for example, through the local regulations). This way, there was much less room for assessments of where attention should be put. This was underscored by statements such as the one from the Airport Director (AD) in response to the question about how it would be different for him if the regulation returned to how it had been before the 2320/2002. He said, "then I could start running an airport again", pointing from his computer and then pointing out of his window to the runway.

This way, we can say that Regulation 2320/2002 diminished possibilities for applying situational capabilities at the leadership level. Since security to a large extent takes precedence over other issues, it gives provisions for and prescribes how time, effort and resources are to be applied. We can see that it is especially processes 2 and 3 that contravene with the situations described above since the leaders assessment of what is 'important' is obstructed and limited by the predetermined structure of the regulation. The leaders did not express their reactions to the reduced space for action as forcefully as the security guards and the handling agents (in terms of tuning out, autopilot and meaninglessness). They did express, however, frustration over the limitations of the system and also a resignation over the cumbersomeness of the system. These issues limited possibilities for action and, hence, did not facilitate for mindful processes to take place at leader level.

7.3.5 Summarising comments: prescription, organisation and reliability

By applying the principles of mindfulness from HRO theory, it becomes clear that many of the structures that frame procedures at the airports obstruct the processes of mindfulness. The most apparent consequence of the security regulation is how it limits the possibilities for action or, as I have called it, space for action. According to HRO theory of collective mindfulness, action is pivotal to facilitating mindful processes. However, prescription in itself is not a direct obstacle to mindfulness. This is demonstrated through studies of various types of HROs (Roberts, 1993b; Rochlin, 1993; Sills, Wolf, & Shelanski, 1982), where prescription is a large part of the job tasks. Weick's counterargument is that it is not the highly standardised routines that make a system reliable, but it is the ability to handle unforeseen issues. Hence, he

does not dismiss prescription per se but argues that facilitating the cognitive processes results in higher reliability.

Reliability is essential for every organisation with the potential for disastrous outcomes. As described in Chapter 3, prescriptive regulation has held an important role in safety industries, where there is a belief that following prescribed procedures will lead to safety and safe outcomes. Prescription in this connection is conceived as a road to reliability. From the prescriptive perspective, the human is 'tamed' by procedures to ensure compliance to a preconceived way to obtain reliability. Of course, prescriptive routines are there for a reason: making sure that procedures maintaining a certain security level are carried out. However, as described by Hollnagel (2008), through his 'error-counting paradigm', automation was prescribed to safeguard the system from the people in it, whereas humans are found to actually provide safety because of their ability to adapt to unforeseen situations. This corresponds well with the fundamental idea of the HRO theory, where they found that organisations that facilitated the five cognitive processes leading to mindfulness could demonstrate extremely good safety records leading to high reliability. It can therefore be reasonable to assume that there could be gains for aviation security to enhance the structures that are already there to facilitate more mindful processes in security work.

However, airport security in Norway is part of a much larger system that may not be comparable to any other HROs, at least as long as it continues to be organised the way it is, wherein regulation shall and must be similar all across Europe. As long as the Norwegian strategy is to continue a pure implementation of the European regulation, adaptation will be difficult; hence, working with local conditions will be very hard. We can say that the Icelandic version provides possibilities that the Norwegian system does not have. Although the Icelandic CAA did not present it as organisational opportunities, it called it 'to decide in one's own house'. This will be much more difficult in the Norwegian strategy, which is to follow the EU course for both the national and international system. If we look at this decision, it is a sensible one considering expertise. Giving over power to other entities may make sense when better expertise is localised elsewhere, but, as the Icelandic approach suggests, these are often not questions of either/or.

7.4 Facing forward

If we consider the EU Regulation 2320/2002 to be highly prescriptive, then what has happened after the implementation? If we look briefly at Regulation 300/2008, the successor to 2320/2002, there were clear intents to move in the direction of a more risk-based regulation for security that was anchored more in risk assessments. However, although the intent was pronounced, according to Poole, there was still a long way to go to have a truly risk-based regime for aviation security with the implementation of 300/2008 (Poole, 2008). If we look at more recent developments within aviation security, this line of progress seems to have continued. For example, in July 2011, the government of the United Kingdom consulted 116 agents in the British civil aviation system to form a proposal to modernise the current regulatory system for aviation security. In its summary, the Department for Transport describes that the intention behind this reform is to "give operators greater flexibility and responsibility to design security processes that deliver specified security outcomes, with greater emphasis placed on the needs of their passengers" (Department for Transport UK, 2012b). In the executive summary based on all of the collected responses, the department states, "The Government believes that the current arrangements are in need of modernisation to bring them into line with better regulation principles, promote innovation and efficiency and ensure best possible passenger experience. The consultation paper set out a proposed way forward which the Government believes would achieve this while maintaining and improving security standards. This Outcome Focused Risk-Based approach (OFRB) would be managed through the progressive introduction of a Security Management System (SeMS) developed and operated by each responsible organisation, building on international risk management best practice, particularly in aviation safety" (Department for Transport UK, 2012a).

If we look at this statement, we see that the UK Department of Transport consider the aviation security regime to be in need of modernisation and that aviation security, as a regulatory area, needs to fall into line with what is described as 'better regulation principles'. This corresponds to what seems to be a general direction within organisations working with aviation security. At The ICAO[76] Symposium on Innovation in Aviation Security, Donald Roussel

[76] International Civil Aviation Organisation

presented clear directions for aviation security, including regulating only when necessary, that decisions to regulate should be based on risk and be outcome-based and flexible wherever possible. Additionally, he asserted the importance of removing outdated regulation (Roussel, 2014).

There is thus an ongoing development in the direction of risk-based, outcome-oriented regulations for security, moving away from the highly prescriptive to more flexibility wherever possible. There has been a general move in the direction of introducing management systems for security, SeMS, which 'imitates' safety and quality management systems (Salter, 2007). The overall aim for this approach is to "improve the culture of security within an organization to help overcome the demands of being a 'high reliability' organization within a difficult and complex work environment" (Salter, 2007, p. 395). Through his study of the implementation of SeMS within Canadian aviation, Salter concludes that SeMS offers value to aviation and security organisations, while there are some unanswered questions regarding the efficiency when it comes to managers and policymakers. These unanswered questions have to do with the difficulty of translating systems from safety and quality over to security. This issue is about the inherent difference between safety and security because security issues cannot be quantified in the same ways that safety issues can be. "Consequently, the risk analysis that lies at the heart of SeMS has a much greater degree of uncertainty than similar management systems" (Salter, 2007, p. 397).

The interconnectedness and tension between safety and security has played a part in lesser and larger degrees throughout this thesis. It is difficult to see one without the other, and because safety and security in aviation were more or less treated equally only some years back, the fact that these areas became differentiated makes them easy to now apply comparatively. In aviation, the borders between safety and security are blurry; often, a threat to one may turn into a threat to the other. For example, considering maintenance work anywhere in the airport, in order to avoid mishaps or accidents, a maintenance worker may fix something in the terminal building or in the aircraft. Maybe he leaves a door unattended for a moment or leaves a tool behind. In a few moments, the door has become a security issue where someone with ill intentions can enter unscreened into the 'clean' part of the airport, and the tool may be picked up by someone and possibly do harm to someone or something. This example demonstrates how difficult it is to separate these

areas and how threats may convert from one to the other. Still, in several ways, this is what happened after 9/11. The two concepts became disentangled, for better and for worse. Was this an expedient separation? The easy answer to this question is 'yes'. First of all, it was clear that the regulatory system prior to 9/11 was not adequate to handle such risks as 9/11. Secondly, and most importantly, there is a large, inherent difference between safety and security: uncertainty. As Salter writes, "terrorist and criminal threats are not quantifiable in the ways that accidents or customer satisfaction may be" (Salter, 2007, p. 397). The answer to this uncertainty became a radical restructuring of the regulatory body for security. By applying recommendations that were already there and adding to them in volume and detail and then making the regulations mandatory and prescribed, safety and security moved in different directions. However, these processes of regulatory development were founded on regulatory development within safety, which to a large extent is retrospective and reactive. Is this appropriate when it comes to security regulation, where "[in] the changing dynamic of the aviation security environment, security organizations are structurally less entrepreneurial than their terrorist and criminal adversaries" (Salter, 2007)? The answer to this may not be one of right and wrong but more, as the CEO of Avinor expressed: "What should we have done then? Should we have waited 2 or 3 or 5 years until it was risk assessed enough? That was maybe the alternative" (5.2.3). Presenting the regulatory development the way I have done in this thesis may seem like a very rational and well-deliberated process. As the informants who have provided information for this thesis described and also as the CEO above expressed, the process of the regulation was perhaps a bit more hectic than this. First of all, 9/11, unprecedented as it was, dramatically demonstrated that the security measures that were in force at the time had largely failed. Therefore, there was no time to apply time-consuming assessments like what the accident prevention tradition was based on; instead, there was an urgent need to develop better measures and to implement them more or less immediately. The EU accepted this responsibility and developed a system that heightened European security. No one seems to challenge the fact that European aviation security largely improved after the implementation of Regulation 2320/2002.

In an attempt to address the counterfactual question this thesis was opened with, "What if 9/11 never happened", the answer may be that the distinct

separation between safety and security would not have occurred. Instead, it would be more likely that safety and security would have kept their interconnectedness and moved in more or less the same direction. It may be reasonable to conclude that safety and security would have arrived where they both now seem to end up: at a combinatory regulatory type in which the strengths of different regulatory types are applied where best suited. Security, however, still has a long way to go to catch up to safety.

Regulation has consequences. Through this study, we have seen some of these mostly expressed through what I have called space for action. Shrinking the possibilities for space for action has had consequences for involvement and adaptation, which again have consequences for the organisation's possibilities to operate mindfully. Based on this information, we can see that implementing the EU security regulation in Norway has had consequences on all levels, but this still does not say anything about the goodness of the security system. This is, of course, not a simple question, and to evaluate the quality of the security regulation has not been my aim. However, regardless of the system that was implemented, 9/11 and other incidents both before and after this event demonstrated that, since attacks were possible, the existing security measures were not sufficient. This knowledge resulted in great changes in how the Western world organised aviation security. It is difficult to measure the effectiveness of the new system since the absence of attacks is not a sufficient measurement. To borrow an expression from statistics, this can result in a type I error, or a false positive, wherein one is led to conclude that a supposed relationship or effect exists, which may not be the case. My claim is that a way around this dilemma may be to look at organisational factors and create the best possibility for organising for reliability.

8 CONCLUSIONS AND FURTHER RESEARCH

The central theme in this thesis has been the transformation of security regulation post 9/11 in the Norwegian setting. In the background of the study was the assumption that this transformation of the regulation was influential and had consequences for the actors in the Norwegian civil aviation system. In order to discern the relationship between the regulatory transition, the type of regulation applied and their consequences for the Norwegian aviation system, I have performed a qualitative case study in the aviation system. The data were collected through interviews of the main actors and authorities within Norwegian civil aviation, fieldworks at three Norwegian airports and by studying the main documents regarding the regulation of civil aviation and international and European cooperation. In addition interviews were conducted within the Icelandic civil aviation system for comparative purposes. This chapter presents the main conclusions and contributions, in addition to the limitations and proposals for further research.

8.1 Overall conclusions of the study

The events of 9/11/01 constitute a starting point for a distinct transfiguration of aviation security regulation. Prior to 9/11, safety and security were treated more similarly within aviation. Although influenced and instructed by international civil aviation organisations, Norwegian aviation was still regulated through Norwegian laws that were guided by governing principles formulated in, among other things, the Public Administration Act. After 9/11, safety remained within this same framework, while security was transformed and conformed into the EU context, thus relieving the national systems and collecting them instead under a singular European banner. By moving regulatory work out of the national context, the arena for influence and involvement moved from the national context to the international level, which entailed a change in how interests (both national and areas of operation) were promoted and maintained.

Although there has not been found any public discourse of the Norwegian authorities' strategy in the transitional phases that followed 9/11, this study has revealed some indicators that suggest that remaining a part of the

European One-Stop Security system was considered important to the main actors within Norwegian civil aviation. However, the Icelandic case has accentuated an alternative to the 'all in' approach taken by the Norwegian authorities by delineating between the national and international system. Obtaining an alternative implementation has not seemed to be a preference for the Norwegian authorities. This was emphasised by the expressed contentment of the current system by informants at the Norwegian Civil Aviation Authority and exemplified by the case 'of exceptions for small airports/aircraft'. This case underscored the stance taken by the authorities to not except any part of the Norwegian civil aviation system to be governed nationally. I find it reasonable, therefore, to conclude that the Norwegian strategy was to follow the EU countries in their implementation strategy and, thus, to avoid self-governance nationally.

One result of this national strategy has been that the prescriptive EU regulation has been uniformly implemented on all Norwegian airports, regardless of size. The implementation has clearly heightened the security level on all Norwegian airports when compared to the pre-9/11 system. That the EU level of security has been implemented ensures that the level deemed acceptable by the EU has, therefore, also been implemented on all national airports.

However, since infrastructural challenges at most of the airports necessitated some sort of regulatory adaptation, varieties in implementation have occurred. Adaptation in this regulatory landscape seems to imply an adaptation that meets the regulatory demand and not an adaptation that considers and focuses on the practicalities of the context or possible unintended consequences of implementing something not suited for the context. This is where the Icelandic authorities expressed contentment with their solution, since they saw the differentiated system as an opportunity to implement context-specific measures based on the assessed risk level. Norwegian authorities expressed that the Kato Air incident demonstrated the need for security on all regional airports, thus justifying the necessity to implement the complete regulation. In this assessment there seems to be an assumption that not implementing the EU regulation entails not implementing security measures at all. On the contrary, the Icelandic case demonstrated an alternative approach in which the choice to not implement the EU regulation entailed implementing measures based on local risk assessments. In this way

of handling it, safety and security were considered more simultaneously and were intertwined. The New Zealand case also contrasted with the Norwegian assessment and provided an alternative implementation on their regional airport network. Measures were instead directed at avoiding the specific kinds of threats that the Blenheim and Kato Air incidents induced, since the EU system (or OECD, as the NZ Government delineated it) was found to be too comprehensive and costly and, thus, was considered to not bear any relationship to the actual threats facing New Zealand regional aviation.

That the Norwegian adaptation of the EU regulation has had the objective of regulatory compliance and not of contextual adaptation has had consequences in the organisational setting. When seen through the theory of organisational reliability, in which reliability ensures practices that produce secure/safe outcomes, the fact that the procedures were perceived as decontextualised, inappropriate in relation to actual threat scenarios, and leading to mindless behaviour, suggests that the regulatory system may have unintended consequences that could threaten the overall security at the airport. In a system that describes and prescribes in detail to avoid variations in implementation, this simultaneously limits severely the space for action for those who have to operate within it. This accentuates the connectedness between the regulatory system and contextual organisational possibilities. It also demonstrates that regulation has to provide the possibilities for the necessary manoeuvring to fully utilise the potential that lies in operating according to mindful processes. In other words, if we accept that accommodating mindful processes leads to higher reliability, there is unused potential in the airport setting which could further heighten reliability.

9/11 can be seen as a date for an accentuated separation between safety and security, two fields that have large similarities and interconnectedness. In hindsight, an opportune question might be to ask if this separation of the two fields, as well as the great transformation of the security field, was fruitful. In this thesis, it has been revealed that the separation and transformation have had consequences. Perhaps the largest consequence has been in what I have labelled space for action. The fact that the regulatory trends for security seem to move in the direction of safety regulation anew, including alternatives that open up possibilities for more space for action, largely coincides with the conclusions drawn in this study.

8.2 Contributions

This thesis provides an in-depth analysis of contextual regulatory consequences within a field that has not previously been extensively investigated. My exploration of the Norwegian civil aviation security system provides insights into the different levels of the system. It also gives descriptions and accounts of different agents' work with, and relationship to, the regulation. This provides insights into consequences of operating within a highly prescriptive regime. The Norwegian system has also been contrasted with another European Free Trade Association (EFTA) country's implementation, Iceland, to provide a wider frame for understanding the Norwegian implementation of the EU security regulation post 9/11. Although the focus has been on aviation security and aviation security regulation, safety has been an important factor in this study. Seeing security in relation to safety, which were previously handled very similarly, accentuates the difference in how we deal with safety and security issues.

Regulatory consequences from risky industries and safety industries have been profoundly studied (Hood, et al., 2001; Kirwan, et al., 2002b), as have organisational theories and perspectives on achieving safety and reliability (Hollnagel, et al., 2008; Weick, et al., 1999). In this thesis I have applied High Reliability Organisation theory, which has been applied, for most parts, on safety organisations and industries. Although one can argue that because of the inherent properties of safety and security (great difference in degrees of uncertainty), applying typical safety literature to security settings may not be unproblematic, I argue that because the focus is on processes that enhances reliability, this is valuable and applicable. This opens up a literary base for future security studies and aids a "de-exoticification" of security as a field by placing it alongside the research area of other high-risk industries.

8.3 Limitations

An empirical study such as this that aims to create rich, contextualised descriptions cannot have an unrestrained span. As the aim for this study has been to see the regulatory transition in relation to the Norwegian aviation system, this comprises many actors at different levels of the system. I chose to include several of these levels to see the system as a connected whole. I also included three airports of different sizes and locations. I am aware that I

cannot claim the findings to represent the entirety of the Norwegian aviation system, but I am convinced that, by choosing three airports, it is reasonable to assume that there is some transference. This first limitation is also applicable in regards to the organisations where I gathered data. As the time for fieldwork in a project such as this always will be limited, a choice must be made between the amount of locations chosen for fieldwork against how much time one can spend at each location. I chose to divide my time between four companies at three locations; hence, the time for fieldwork became reduced for each group at each location which would have been different if I had chosen one airport (following the four companies) or one work group (that I followed on the three airports). A mitigating factor in this choice was, however, that the same groups appeared (almost) at every location and, thus, were more familiar to me.

I also see that including the EU context into this study would have provided valuable insights, both regarding the work of the Norwegian authorities within the EU and EFTA and also the regulatory development in the EU. This could have nuanced the view of the assessments behind the regulations as well as the direction of the regulatory strategy or strategies that guide the regulations I have studied in practice. This point will, however, also be presented below as a proposition for further research.

8.4 Suggestions for further research

As research includes opening up several doors to relevant and interesting issues, thus making the study more complex, it also involves closing some as one begins to see that there are limits to what it is possible to include. This final part suggests some possibilities for further research, including some of the doors that became closed in this project.

As just mentioned, looking at the processes of regulatory work regarding security in the EU and EFTA connection would be highly interesting, especially if set in relation to the findings from this thesis. This would provide more insights and background into the reasoning and strategies chosen by the Norwegian authorities in questions regarding aviation security. An alternative approach could be to follow a regulation from its early beginnings all the way to its implementation. This would also make it easier to follow these processes, especially regarding influence and involvement from different actors, thus also democratic processes, within the European aviation system.

Also, a more conceptual and theoretical field of research could be to investigate the difference in power between safety and security issues. Security has, because of its extreme uncertainty, been removed out of 'normal politics' and into almost a state of exceptionalism. Because secrecy has been deemed a necessity in security measures, this will also mute and exclude (to uncertain extents) democratic processes, since secrecy ostracises wide involvement. Such a study could investigate if this secrecy is justified and, also, if this secrecy is justified when considering the costs, for example, in terms of the blind faith people on the 'outside' of the system must have since transparency is so low.

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