



NAVAL POSTGRADUATE SCHOOL

MONTEREY, CALIFORNIA

THESIS

**POLICING THE AEROTROPOLIS: A MODEL
FOR SECURING THE NATION'S LARGE AIRPORTS**

by

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March 2021

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REPORT DOCUMENTATION PAGE			<i>Form Approved OMB No. 0704-0188</i>	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instruction, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188) Washington, DC 20503.				
1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE March 2021	3. REPORT TYPE AND DATES COVERED Master's thesis		
4. TITLE AND SUBTITLE POLICING THE AEROTROPOLIS: A MODEL FOR SECURING THE NATION'S LARGE AIRPORTS			5. FUNDING NUMBERS	
6. AUTHOR(S) Joshua T. Cousins				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Naval Postgraduate School Monterey, CA 93943-5000			8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) N/A			10. SPONSORING / MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government.				
12a. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release. Distribution is unlimited.			12b. DISTRIBUTION CODE A	
13. ABSTRACT (maximum 200 words) As aviation continues to be the fastest and most efficient form of global transportation, airports across the country continue to see exponential growth in size and population. This expansion means airports will remain a high-value target to crime and terrorism. The need to protect the airport environment against these threats is essential. The responsibility of policing the nation's major airports is unique and full of challenges. Airport police must balance the requirements of providing security to a critical infrastructure and highly transient population, with the needs of protecting the surrounding businesses and commercial developments around the airport. This research answers the question of whether traditional policing models are effective in protecting and serving this unique environment or if a new model should be adapted to suit the needs of policing the aerotropolis better. Research findings, combined with a comparative analysis of policing methods at major U.S. airports, show that a dedicated, highly proactive, and customer-oriented police force is vital in ensuring the nation's large airports and the aviation industry continue to play a vital role in the world economy.				
14. SUBJECT TERMS airport, aerotropolis, aviation, police, policing, law enforcement, security, critical infrastructure			15. NUMBER OF PAGES 107	
			16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT UU	

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FOR SECURING THE NATION'S LARGE AIRPORTS**

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Submitted in partial fulfillment of the
requirements for the degree of

**MASTER OF ARTS IN SECURITY STUDIES
(HOMELAND SECURITY AND DEFENSE)**

from the

**NAVAL POSTGRADUATE SCHOOL
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ABSTRACT

As aviation continues to be the fastest and most efficient form of global transportation, airports across the country continue to see exponential growth in size and population. This expansion means airports will remain a high-value target to crime and terrorism. The need to protect the airport environment against these threats is essential. The responsibility of policing the nation's major airports is unique and full of challenges. Airport police must balance the requirements of providing security to a critical infrastructure and highly transient population, with the needs of protecting the surrounding businesses and commercial developments around the airport. This research answers the question of whether traditional policing models are effective in protecting and serving this unique environment or if a new model should be adapted to suit the needs of policing the aerotropolis better. Research findings, combined with a comparative analysis of policing methods at major U.S. airports, show that a dedicated, highly proactive, and customer-oriented police force is vital in ensuring the nation's large airports and the aviation industry continue to play a vital role in the world economy.

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LIST OF ACRONYMS AND ABBREVIATIONS

AOA	airport operations area
BJS	Bureau of Justice Statistics
BOS	Boston Logan International Airport
CCTV	closed circuit television
COP	community-oriented policing
DEN	Denver International Airport
DFW	Dallas/Fort Worth International Airport
DIA	Denver International Airport
FBI	Federal Bureau of Investigation
IATA	International Air Transportation Association
LAX	Los Angeles International Airport
LMI	Logistics Management Institute
NAS	National Airspace System
POP	Problem-oriented Policing
SARA	can, analyze, respond, assess
SIDA	security identification display area
SRO	school resource officer
TSA	Transportation Security Administration
VBIED	vehicle borne improvised explosive device

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EXECUTIVE SUMMARY

The concept of the airport city was developed in the early 1990s, sparking the term “aerotropolis” to define the major metropolitan growth of airports around the world.¹ Today, several airports in the United States have expanded into major metropolitan areas in their own right and an emerging dichotomy exists within these aerotropoli involving the importance of the passenger terminal areas considered critical infrastructure versus the surrounding business complexes that are still airport property but are not considered as critical in nature. Airport police are federally mandated to provide an adequate police presence in the terminal areas and critical infrastructure of the airport.² How do these law enforcement agencies balance the requirement of securing the terminals with the necessity of protecting the other metropolitan areas of the airports? Are current policing models effective in ensuring the entire airport remains safe and secure or is a new policing model needed designed specifically for the aerotropolis?

The purpose of this research is to gather qualitative data regarding the growing trend of the aerotropolis and the concepts involved in policing these major airports in terms of federal mandates, enforcement challenges, and policing models with the intent to identify effective strategies to balance the policing needs of the aerotropolis better. Academic research specific to airport law enforcement and policing models used at major international airports is noticeably lacking. Much of the research available pertains to security measures employed by the Transportation Security Administration and does not mention local airport police agencies. Due to this lack of specified research material, a comparative case study was used to analyze policing methods utilized by airport police at three major international airports. Each one of these airports represents one of the three major types of airport policing seen at airports in the United States. Members of police agency command staff from each airport were interviewed to discover key similarities and

¹ John D. Kasarda and Greg Lindsey, *Aerotropolis: The Way We'll Live Next* (New York: Farrar, Straus and Giroux, 2011), 8.

² “Transportation,” Department of Transportation, Code of Federal Regulations, title 49 (1994 comp.): 1500, https://www.ecfr.gov/cgi-bin/text-idx?SID=d8c792fadd66faf6b6c35959ed0e2a3e&mc=true&tpl=/ecfrbrowse/Title49/49cfrv9_02.tpl#1500.

differences in policing methods between the three. The airports used in the study were Boston Logan International Airport (state police), Denver International Airport (local municipal police), and the Dallas Fort Worth International Airport (airport police).

The findings of the research and comparative case study show that the aviation industry is continuing to grow, which has resulted in airports expanding with new commercial development and larger footprints.³ Policing these large airports comes with unique challenges not seen in traditional forms of metropolitan policing. The transient nature of the populations equates to a lack of a static community base and an increase in crime making it difficult to use community oriented and data driven policing methods to lower crime rates.⁴ All three primary types of policing used at major airports are experiencing the same challenges in rising population and crime rates, resource management issues, and employing effective policing methods.⁵ The major finding from the interviews is airport policing must become more proactive and less reactive if it is to be successful in preventing and reducing crime.

Current models of policing have been established and tested for many decades in metropolitan policing. These models meet different needs and are employed based on the environment being policed. However, these models were centered on policing traditional static and well-established populations. Airport police officers face the challenge of providing public safety to a highly transient and fleeting population in an environment that does not react well to change or disruption. Policing models must be adapted to be effective in providing safety and security to these populations of strangers in such a unique environment.

This thesis offered the following recommendations for adapting and modeling a policing approach specific to major airports:

³ Stephen J. Appold and John D. Kasarda, "The Airport City Phenomenon: Evidence from Large U.S. Airports," *Urban Studies* 50, no. 6 (May 2013): 1239–59, <https://doi.org/10.1177/0042098012464401>.

⁴ Stephen Jarrell and Roy M. Howsen, "Transient Crowding and Crime: The More 'Strangers' in an Area, the More Crime Except for Murder, Assault and Rape," *American Journal of Economics & Sociology* 49, no. 4 (October 1990): 483–94, <https://doi.org/10.1111/j.1536-7150.1990.tb02476.x>.

⁵ This information was obtained during interviews with police agency command staff from Boston Logan International Airport, Dallas/Fort Worth International Airport, and Denver International Airport.

- The Balancing Act: Currently, airport policing is focused on protecting the terminals and areas with greatest economic impact and attractiveness to crime and terrorism. As these airports continue to grow and diversify, focus must shift outward to encompass the protection of surrounding business districts. Many of the tactics used in the central terminal areas can be modified to conduct campus-style policing efforts aimed at policing the entire airport environment.
- Identify the Community: Gaining community engagement from a transient population is difficult. Airport employees and stakeholders are the most stable and unchanging population on the airport. Engaging the employee populous to have a sense of ownership in the safety and security of the airport through community-oriented policing programs can be an effective force multiplier in keeping the airport safe and operational. The philosophy of policing as a service to the community can also be used to shift community-oriented policing concepts back on the officers. The officers should consider the airport as their community with the responsibility to protect it and serve as its guardian.
- Proactive Detection and Deterrence: Active patrolling, reassurance policing, and high-visibility activity are essential in hardening the airport against potential crime and terrorism. While traditional metropolitan policing is often reactive in nature, airport police typically have more discretionary time to commit to self-initiated activity. That activity should be in proactive policing measures aimed at crime reduction and prevention.

These recommendations serve as guidance in providing a more effective policing model specific to the aerotropolis, which maintains a proactive approach to airport law enforcement methods with airport-specific training, high-visibility deterrence, and an emphasis on officer presence. However, the airport environment encompasses more than just being seen. Airport police must provide reassurance policing within the terminals and

other high-value target areas to deter threats while also maintaining a more customer-oriented approach to not impact the business aspect of the airport negatively. While difficult at times, airport police must find a fine balance between business and convenience with that of public safety and security.⁶ As aerotropoli adapt and grow, aerotropolis policing must adapt and grow with them. The future of air travel depends on it.

As long as air travel is the quickest and most efficient form of global transportation, these airports will keep growing and continue to have a major economic impact on the people and regions they serve. Airport policing is essential to ensuring the protection and safety of the airport environment and the traveling public.⁷ Having an effective policing model specific to airport law enforcement is vital to maintaining order, resiliency, and continuity of operations to keep the aviation industry running smoothly. In other words, an adequate, well-equipped, and well-guided police force dedicated to providing safety and security at our nation's major airports is necessary.⁸

⁶ Robert P. Mark, "Airport Security: The Great Balancing Act," *Airport Business*, December 2013, 17.

⁷ Heather Monteiro, *Models for Law Enforcement at Airports: A Synthesis of Airport Practice* (Las Vegas, NV: Airport Cooperative Research Program, 2020), 2.

⁸ Monteiro, 2.

ACKNOWLEDGMENTS

First and foremost to my wife, Ashlie: the patience and support you have given me throughout this process has been the lifesaver I needed to stay afloat during the long hours of research and writing. Without you, there would have been little chance of success. To Alan Black, Jon Taylor, Jason Byers, and others at Dallas/Fort Worth International Airport who allowed me the opportunity to be a part of this prestigious program and stood by me while I endeavored to complete my degree, I owe a heartfelt and sincere thank you. To my advisors, Shannon Brown and Dave Brannan, and other mentors within the Center for Homeland Defense and Security: you have piloted me along this journey and provided me with priceless knowledge and guidance along the way. Without your support and professional expertise, I would have been lost. Finally, to Mackensie, this thesis is proof that if you set your mind to it, anything is possible.

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I. INTRODUCTION

A. PROBLEM

In 2011, John D. Kasarda coined the term “aerotropolis” based on a prediction by J. G. Ballard that airports would grow to become self-sustaining metropolitan city centers.¹ An aerotropolis would exist as an urban structure with a “central airport as its nexus.”² The term is meant to be used in an economic and business context to describe the process of large international airports becoming not just transportation hubs but cities in themselves with their own infrastructure and public services.

Since that prediction in 1997, rapid growth has occurred in the aviation industry, even after the events of 9/11. The American economy is becoming largely dependent upon air travel.³ Large international airports are expanding at a rate never seen before, and the industry is booming with no signs of slowing down. Airports like Dallas/Fort Worth International Airport (DFW) and Denver International Airport (DEN) are now both larger in land size than the island of Manhattan, with over 70 million people traveling through per year. What once were forests and farmland surrounding these airports are now industrial and mixed-use business centers. This growth attracts businesses, retail shops, bars, attractions, and hotels to an area once dedicated strictly to moving people and products from one destination to another. As Ballard predicted, these airports are now looking and acting more like large metropolitan cities. Therefore, a unique policing model that supports and emphasizes both critical infrastructure protection and metropolitan policing demands should be explored to ensure the safety and security of these large airport cities.

¹ John D. Kasarda and Greg Lindsey, *Aerotropolis: The Way We'll Live Next* (New York: Farrar, Straus and Giroux, 2011), 15.

² Usman W. Chohan, *The Concept of the Aerotropolis: A Review* (Islamabad: Centre for Aerospace and Security Studies, 2019), 1, <https://papers.ssrn.com/abstract=3412543>.

³ Stephen J. Appold and John D. Kasarda, “The Airport City Phenomenon: Evidence from Large U.S. Airports,” *Urban Studies* 50, no. 6 (May 2013): 1239, <https://doi.org/10.1177/0042098012464401>.

From a business standpoint, economists consider this rapid growth a financial boon, which solidifies the fact that international airports are becoming economic engines powering entire regions. However, from a policing standpoint, this growth signifies rising crime rates, higher call loads, and a bigger target for terrorism. In an environment considered national critical infrastructure, airport police officers are now having to balance the responsibilities of providing government-mandated security to the traveling public, as well as the law enforcement obligations of modern urban policing. Airport police continue to face emerging challenges on an international scale—ranging from countering terrorism, to combating human trafficking, to reducing the transport of illegal narcotics, to limiting the spread of worldwide pandemics—all while being “customer oriented.”⁴ These missions are becoming increasingly difficult as economic development, passenger loads, and crime rates continue to grow due to the increasing popularity of airports. Protecting these airports is becoming more difficult due to declining police recruitment in national police agencies and a continuous effort to do more with less.⁵

Depending on the airport’s governing body, several different jurisdictional policing methods are in place. For example, Troop F of the Massachusetts State Police has jurisdiction at the Boston Logan International Airport (BOS), the Denver Police Department at DEN, and the DFW Department of Public Safety, a law enforcement agency controlled by a joint airport board at DFW. With these jurisdictional differences come different models and practices of policing. A comparative analysis of these different

⁴ Duane P. McGray, “Airport Policing in the 21st Century,” *Airport Improvement Magazine*, September 2013, <https://airportimprovement.com/article/airport-policing-21st-century>.

⁵ Tom Jackman, “Who Wants to Be a Police Officer? Job Applications Plummet at Most U.S. Departments,” *Washington Post*, December 4, 2018, <https://www.washingtonpost.com/crime-law/2018/12/04/who-wants-be-police-officer-job-applications-plummet-most-us-departments/>.

approaches to the problem may identify or prescribe an all-encompassing policing model that best suits the needs of protecting and securing the “aerotropolis.”⁶

B. SIGNIFICANCE OF RESEARCH

An extensive amount of empirical research is available regarding policing models currently used by U.S. agencies. These models provide guidance to police executives on how their agencies should develop methods to increase legitimacy within their agencies and reduce crime while protecting the rights of the people and cultivate working relationships within their community. However, these models are focused on policing fixed communities with detectable crime patterns. Very little research or guidance is found on policing large transient populations combined with the often chaotic and unpredictable environments found at major international airports. This research asks the following question: as these major airports continue to grow into large metropolitan cities, how should airport law enforcement agencies effectively police this unique environment and balance the responsibilities of critical infrastructure security with the obligations of modern metropolitan policing needs?

Asking this question in this manner leads to definitive recommendations of best practices in airport policing. The question also offers the ability to address the nature of airport policing by explaining the concept of the aerotropolis and defining the term aerotropolis policing to provide insight into the current and future needs of this field. A prescriptive approach also allows for comparative case studies of different international airport police agencies, as well as an analysis of different policing models. This approach

⁶ Boston Logan International Airport: The airport is owned and operated by Massport, a local port authority. Troop F of the Massachusetts State Police holds the responsibility for public safety and law enforcement. “Public Safety,” Massport, accessed January 9, 2021, <https://www.massport.com/massport/about-massport/public-safety/>; Denver International Airport: The Denver International Airport (locally known as DIA) Police Bureau is responsible for policing the airport and is a section of the Administration Division of the Denver Police Department. “Police Department,” City and County of Denver, accessed December 23, 2020, [https://www.dfairport.com/dps/](https://www.denvergov.org/content/denvergov/en/police-department/contact/police-directory.html#:~:text=The%20Denver%20International%20Airport%20(DIA,Uniformed%20patrol%20of%20airport%20property; Dallas/Fort Worth International Airport: DFW Airport is co-owned by the cities of Dallas and Fort Worth, TX and is considered a political subdivision operated by an airport board. The DFW Airport Police, part of the DFW Department of Public Safety, are responsible for policing the airport. “DFW Airport Department of Public Safety,” DFW Airport, accessed January 11, 2021, <a href=).

will not only evaluate tactics, techniques, and procedures but also distinguish what works best and offer suggestions to enhance the field, through either current models or a new model of policing specific to the field. A possible setback of this paradigm may be finding that each airport is too distinct for one specific answer.

C. HYPOTHESES

Local governments own the majority of large airports in the United States.⁷ Since the 1920s, if a city wanted to grow and develop, it had to build an airport. This allowed them to bring more people in, causing businesses and industries to follow. As the country grew into the commercial age of the 1950s, these airports had to grow as well to accommodate larger planes and more passenger traffic.⁸ Many hub airports continued to expand into major metropolitan areas themselves with everything major cities had to offer, as well as special security and safety needs that go along with being a critical infrastructure. As airports and the aviation industry have progressed, and air travel has become easier, they have become a target for criminal enterprise and terrorism.⁹ This situation makes policing large airports a unique challenge. It has become apparent that police departments tasked with protecting these vital commodities have a significant role to play in crime prevention and rapid response to terrorism. The hypothesis of this thesis is:

- Current policing models are insufficient to demonstrate the needs of policing large international airports. Community Orientated Policing and Problem Orientated Policing are two of the most prominent models currently being used by police agencies across the United States.¹⁰ These models are effective in permanent populations where communities are

⁷ Simon Mosbah and Megan S. Ryerson, "Can U.S. Metropolitan Areas Use Large Commercial Airports as Tools to Bolster Regional Economic Growth?," *Journal of Planning Literature* 31, no. 3 (August 1, 2016): 318, <https://doi.org/10.1177/0885412216653100>.

⁸ Mosbah and Ryerson, 318.

⁹ United Nations Office on Drugs and Crime, *Transport-Related (Civil Aviation and Maritime) Terrorism Offenses*, Counter-Terrorism Legal Training Curriculum (New York: United Nations Office on Drugs and Crime, 2014), 1.

¹⁰ Michael D. Reisig, "Community and Problem-Oriented Policing," *Crime and Justice* 39, no. 1 (2010): 42, <https://doi.org/10.1086/652384>.

well known and crime mapping can be used to identify problem areas. Airport populations are highly transient and thus require different methods and approaches to reduce crime and promote effective relationships between tenants, the traveling public, and the police.

This thesis examines practices and methods being used by large airport police departments with differing jurisdictional governance and recommends changes in airport policing to benefit agencies and should be considered by executives at large airports across the United States. The study also reviews the concept of the Aerotropolis and the manner in which large hub airports will continue to grow into large-scale independent cities that will require their own methods and models for policing in the future.

D. METHODOLOGY

This thesis is a structured analysis of airport policing that focuses primarily on large category X airports in the United States.¹¹ To answer the research question, an overview of the rapid expansion of airports and the new concept of the aerotropolis describes the challenges of policing large airports. The overview is followed by an examination of the needs and requirements involved in balancing the responsibilities of airports' critical infrastructure protection and metropolitan policing throughout the airport environment and breaks down the aerotropolis into its distinct components.

This thesis also includes comparative case studies of three airport police departments that differ based on operating authority (municipal, state, and airport-governed) and evaluates how each agency effectively balances the responsibilities of airport security and local law enforcement that results in a synthesis of best practices in airport policing. The comparison study will examine relationships among the different factors introduced through an interview process and research related to each agency to

¹¹ The Transportation Security Administration (TSA) classifies all commercial service airports into five security categories (Category IV, III, II, I, and X). Category X airports are the largest and busiest airports in the nation when measured by passenger volume and aircraft movements and perceived threat levels. These airports require the highest level of security by the TSA.

determine similarities and differences.¹² By identifying processes in their unique policing models, how they compare to each other in their application of both airport security and localized law enforcement, this study will determine best practices and procedures in airport policing. This case study will be broken down into five main parts: organization, resource management, perceived challenges, policing models, and community considerations.

The validity of this small case study will be maintained by concentrating on these necessary dependent variables when measuring and determining an agency's effectiveness in airport policing.¹³ The scope of this thesis encompasses airport law enforcement dedicated only to policing large international airports in the United States and will not include the role of the Transportation Security Administration (TSA) or policing at small non-hub airports. The majority of research in airport security has already focused on the TSA and the processes it uses to provide security within the airport.

The primary source of data for this thesis is available academic literature and case study findings. While little research is done on airport policing specifically, existing literature pertaining to large airports in general, policing models, and critical infrastructure protection, is applicable. Other data sources include open-source material, standard operating procedures, and crime reporting data from large airport police agencies. Case study comparison data is gathered through interviews with members of senior police leadership within the three selected agencies.

The expected output of this thesis is to contribute to best practices in law enforcement's role in protecting large airports. The intent of analyzing the growing trend of large airport cities and the requirements of protecting these aerotropoli is to prove a need for a well-rounded police agency dedicated to the protection of both the critical infrastructure of the airport along with the outlying metropolitan areas within its borders. In gathering data from three very different agencies tasked with similar law enforcement

¹² Sidney Verba, "Some Dilemmas in Comparative Research Review Articles," *World Politics* 20, no. 1 (October 1967): 115.

¹³ Douglas Dion, "Evidence and Inference in the Comparative Case Study," *Comparative Politics* 30, no. 2 (1998): 127, <https://doi.org/10.2307/422284>.

responsibilities at three of the busiest airports in the United States, the objective is to collect evidence and data to recommend a policing model specific to large airport law enforcement that effectively covers both areas of responsibility.

E. THESIS OUTLINE

Major airports are growing as the aviation industry continues to be the primary transportation method around the world. As these airports grow, crime and terrorism follow by creating an environment in need of specialized policing. Very little research is available on airport policing in the United States.

1. Introduction

Policing models vary on technique and method but are typically based on traditional metropolitan policing. The problem that police agencies at major airports are facing is these models do not take into consideration how to police large transient populations and critical infrastructure at the same time.

2. Literature Review

A vast amount of research and information relating to current policing models in the United States is available, however, of that research, very little is dedicated to airport policing specifically. This literature review focuses on current research and debate on the future of airports, current policing models being employed by metropolitan police departments in the United States, the information available on airport policing and security topics, and whether current trends in policing can be applied at large international airports.

3. The Aerotropolis

This chapter discusses the concept of the airport city and the manner in which rapid growth and the current state of the aviation industry are affecting airports and the communities they support. This chapter breaks down the airport city into its three symbolic components to explain the operational relationship between these elements better. The fundamental assumption is that as these components continue to grow and develop, they face an increase in crime and congestion and become a more attractive target to terrorism.

The overall effects of a catastrophic event at a large international airport are quite profound. This chapter presents both internal and external costs of a major disruption to put into perspective how the effects can potentially reach an international scale.

4. Aerotropolis Policing

This chapter defines aerotropolis policing by examining the Aerotropolis' two distinct parts and identifying the needs and requirements of policing both the critical infrastructure of the airport, as well as its surrounding metropolitan business districts. Many federal mandates and local requirements must be met when securing and policing commercial airports, as well as different approaches to ownership and governance of U.S. airports. This chapter discusses how the dichotomy of the aerotropolis environment along with the way airports are governed affect policing methods and approaches. This chapter highlights how popular policing models and training methods are being used across the nation and how they may be modified and combined to form an effective model for aerotropolis policing. In addition, special considerations for airport policing based on previous court decisions and findings are also reviewed.

5. Comparison Study

This chapter provides an analysis of how several airport law enforcement agencies are approaching the task of policing a large international airport. This study involves an overview and comparison of three major international airports considered aerotropoli by definition but that differ in the operational governance of their police agencies. To understand best practices better, this chapter identifies how these airport police agencies compare and contrast to each other in their primary focus and approach to securing their areas of responsibility.

6. Findings, Recommendations, and Conclusions

This chapter summarizes the findings of this thesis research and reiterates the need for a specific policing model that may be a combination of current policing methods that will provide guidance to airport law enforcement agencies responsible for protecting and securing large international airports. This chapter also provides recommendations and a

conclusion to address the research question raised in this thesis: As major international airports continue to grow into large metropolitan cities, how should airport law enforcement agencies effectively police this unique environment and balance the responsibilities of critical infrastructure security with the obligations of modern metropolitan policing needs?

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II. LITERATURE REVIEW

The purpose of this literature review is to explore available research and writings on American policing, the policies and practices of policing a large metropolitan airport, and the future of that environment. More narrowly, this literature review explores existing policing models and strategies as they relate to the responsibilities and difficulties surrounding the policing of transient populations while balancing the requirements of protecting critical infrastructure with the needs of metropolitan law enforcement. This review also identifies literature that addresses the future of airports in the current environment and the debate on whether airports are in a transition period of growth or decline. Finally, this review addresses arguments concerning current U.S. policing policies and procedures and if they may or may not be applicable in an airport setting.

A. AIRPORT POLICING AND SECURITY

The majority of research involving the safety and security of the aviation industry focuses on securing aircraft and protecting the passengers who are on them.¹⁴ This viewpoint is understandable based on the value of information pertaining to the attacks on 9/11 and the use of aircraft in those attacks to prevent another similar event. Subsequent threats have also been made to bomb U.S. bound flights in the years following. The amount of academic research and literature specific to securing airport infrastructure is much more limited. The amount of information pertaining to airport policing specifically is even more scarce and stems primarily from independent news articles, airport-related professional journals, and magazines. The topic of airport security has been widely debated and discussed, with most research concluding that airports are included in the nation's critical infrastructure, are vulnerable to attack, and must be secured.

However, most articles pertaining to airport security are in reference to the TSA's role in screening passengers and baggage and justifying a need for passenger screening and

¹⁴ Mark G. Stewart and John Mueller, "A Risk and Cost-benefit Analysis of Police Counterterrorism Operations at Australian Airports," *Journal of Policing, Intelligence and Counter Terrorism* 9, no. 2 (2014): 98.

increased security measures post-9/11. For example, Robert Mark goes into detail about how airports must balance the responsibility of protecting passengers, employees, aircraft, and cargo but speaks specifically to the TSA's role in that effort and does not mention policing.¹⁵ While this information is valuable in justifying a need for security and confirming the need to protect passengers and aircraft, it does not specifically address or articulate the role of law enforcement in the safety and security of the airport environment.

The primary topic of most airport police related research focuses on federal mandates that require dedicated police forces at large airports and how unique and difficult the role of an airport police officer is.¹⁶ Most articles on airport policing typically focus only on one specific airport, specifying the size, passenger loads, and the specialized environment that necessitates a different approach to policing that is more customer-oriented. One airport synthesis produced by the National Academies of Science, Engineering, and Medicine specifically relates to models for airport policing.¹⁷ This synthesis is beneficial in providing general information over a wide topic; however, it is a very broad overview and compilation of data based on web-based survey responses of airports ranging in size and capacity.

In relation to security and the transient population witnessed at airports, much of the research stems from the privacy debate regarding the use of flight records and the act of marrying passenger names and personal details with flight information through manifests and flight databases. The use of this information, retention periods and controversy over who gets access to this information is what is being questioned and discussed.¹⁸ While the collection of flight manifests and records does factor into intelligence collection and overall safety for the airlines and traveling public, it does not speak to the difficulty of policing a population that is fluid and ever-changing.

¹⁵ Robert P. Mark, "Airport Security: The Great Balancing Act," *Airport Business*, December 2013.

¹⁶ Jim Weiss and Mary Dresser, "Policing an International Airport," *Law & Order; Wilmette* 48, no. 10 (October 2000): 228–33.

¹⁷ Heather Monteiro, *Models for Law Enforcement at Airports: A Synthesis of Airport Practice* (Las Vegas, NV: Airport Cooperative Research Program, 2020).

¹⁸ Sarah Jane Fox, "Policing Aviation and Keeping the Peace: Intelligence-Fed Security," *International Journal on World Peace* 36, no. 1 (March 2019): 61–90.

B. THE FUTURE OF AIRPORTS

The significance of this thesis is tied to the foreseeable future of airports. The importance of airport policing and developing a specific model for airport law enforcement is much more relevant if airports are to continue to increase in size and impact. The amount of research into the future of airports and the aviation industry show that the industry has been on sharp rise since the 1980s even after a few uneven years directly following the attacks of 9/11.¹⁹ The number of revenue passenger miles of all U.S. air carriers has tripled in the last three decades, which has created a need for larger capacity planes, additional routes, and larger airports. All things looked promising for airlines and airports with record setting passenger and cargo loads year after year until the start of the COVID-19 pandemic in March 2020.

Recent research is now questioning the airline industry's ability to continue exponential growth based on several factors that have emerged, which has caused public concern and an increased hesitation to fly. Two fatal crashes of the new Boeing 737 Max aircraft lead to investigations revealing failures in company and government oversight, complex avionics, a lack of pilot training, the grounding the planes, and that reduced confidence in the industry.²⁰ The Green New Deal, a Democratic proposal to cut carbon emissions, includes a referendum to limit air travel substantially that may lead to a major decline in the airline industry all together.²¹ The largest and most recent threat to the aviation industry has been the COVID-19 pandemic, in which the world-connecting network of airports have been blamed, in part, for the proliferated spread of the virus and hindered worldwide attempts to contain the spread of the virus.²²

¹⁹ Appold and Kasarda, "The Airport City Phenomenon," 1239.

²⁰ Chris Palmer, "The Boeing 737 Max Saga: Automating Failure," *Engineering* 6, no. 1 (February 1, 2020): 2–3, <https://doi.org/10.1016/j.eng.2019.11.002>.

²¹ Dan Reed, "Here's How Much a New Green Deal Could Cost U.S. Aviation, Travel and Aerospace Industries," *Forbes*, February 13, 2019, <https://www.forbes.com/sites/danielreed/2019/02/13/heres-how-much-a-new-green-deal-could-cost-americas-aviation-travel-aerospace-industries/>.

²² Glenn Lawyer, "Measuring the Potential of Individual Airports for Pandemic Spread over the World Airline Network," *BMC Infectious Diseases* 16, no. 1 (February 9, 2016): 70, <https://doi.org/10.1186/s12879-016-1350-4>.

The primary view of research relating to airports post-COVID-19 is that they will have to adapt new strategies to maintain growth. These strategies include services that will limit passenger and employee contact to minimize spreading any future disease. Research has also concluded that new technology is needed to reduce costs for both passengers and airlines and to enhance the overall passenger experience pre-flight.²³ Most literature pertaining to the impact of COVID-19 and the future of airports post-pandemic agree that flights will return to pre-COVID numbers. The only disagreement is in how long that recovery will take.

C. U.S. POLICING MODELS

Since the development of professional policing standards beginning in the 1960s, multiple policing models have been established to maximize the effectiveness and efficiency of policing strategies. These models include zero-tolerance, broken windows, hot spot, community-oriented, problem-oriented, and evidence-based policing. This review focuses on the two most popular models in U.S. police departments, community-oriented and problem-oriented policing (POP). According to a 2005 National Institute of Justice report, a majority of police departments in the United States are now using at least some form of community-oriented policing (COP).²⁴ Moreover, a 2008 Department of Justice report concludes that POP is now one of the most widely used policing models in the United States.²⁵

To say that both policing models are the two most popular does not mean they are mutually exclusive. Much of the relevant literature attests that many agencies in the United States have adopted elements of both. Michael D. Reisig states that both strategies are compatible, which allows agencies to use both models simultaneously.²⁶ However, many

²³ Francisco Serrano and Antonín Kazda, “The Future of Airports Post COVID-19,” *Journal of Air Transport Management* 89 (October 1, 2020): 101900, <https://doi.org/10.1016/j.jairtraman.2020.101900>.

²⁴ Wells and Falcone, *Policing in the United States*, 1.

²⁵ David Weisburd et al., “The Effects of Problem-Oriented Policing on Crime and Disorder,” *Campbell Systematic Reviews* 4, no. 1 (2008): 9, <https://doi.org/10.4073/csr.2008.14>.

²⁶ Michael D. Reisig, “Community and Problem-Oriented Policing,” *Crime and Justice* 39, no. 1 (2010): 1–53, <https://doi.org/10.1086/652384>.

scholars stress that these models, while compatible, are very different approaches, with individual and exclusive philosophies guiding officers' actions toward policing and reducing crime. COP practices have changed over time and are now often implemented in combination with other programs that make it difficult to analyze components specific to its practices over the innovations of other models.²⁷

All authors agree that to employ a COP strategy effectively, an agency must engage and empower the community. This idea will come into play in defining the airport community and the difficulty of engaging and empowering a transient population. Much of the literature regarding POP differs in the methodology applied, though most scholars cite the SARA method (scan, analyze, respond, and assess the situation) as most effective. Other writers, including Sidebottom and Tilley, state that the SARA model is too generic and over-simplifies a complex process.²⁸ This argument will be important for this study in identifying how to effectively identify and address problems occurring in the urban sprawl outside the central terminal areas.

Large international airports are like major metropolitan cities unto themselves, similar in size, composition, and population.²⁹ However, many unique factors come into play concerning these airports that make them very different from your average metropolitan areas. Unique challenges are thus created in design and operation of specific policing models to provide safety and security to this challenging environment.

D. CONCLUSION

Extensive research has been conducted on the various policing models being employed by law enforcement agencies in the United States. This research offers debates on the effectiveness of each model, and analyzes their pros and cons and how they compare

²⁷ Anthony A. Braga and David L. Weisburd, *Police Innovation and Crime Prevention: Lessons Learned from Police Research over the Past 20 Years* (Washington, DC: National Institute of Justice, 2006), 3.

²⁸ Aiden Sidebottom and Nick Tilley, "Improving Problem-Oriented Policing: The Need for a New Model?," *Crime Prevention and Community Safety* 13, no. 2 (May 2011): 79–101, <http://dx.doi.org/10.1057/cpcs.2010.21>.

²⁹ Scott McCartney, "Where a Cop's Beat Includes a Tarmac," *Wall Street Journal*, sec. Travel, April 8, 2010, <https://www.wsj.com/articles/SB10001424052702303591204575169803460495206>.

or differ from each other. It is also easy to find academic and professional research regarding the development and operation of major airports. Kasarda's writings seem to be the thread connecting most research on major airports and the concept of the aerotropolis across many fields, including engineering, design, and even finance as it relates to airports. This approach makes sense, as he coined the term and has completed a wide range of research on the topic. However, it also makes it difficult to find conflicting ideas or arguments.

Very little academic or professional literature is specific to the tasks and responsibilities of policing the aerotropolis. This thesis serves to contribute to the on-going discourse of policing in hopes of adding value to this concept of providing vital public safety and security to this nation's largest and busiest airports. The first step in joining this conversation, before offering analysis on policing the aerotropolis, is to define exactly what an aerotropolis is and what makes it unique and distinctive.

III. THE AEROTROPOLIS

A. THE AIRPORT CITY

While this thesis is about analyzing the responsibilities and requirements of policing an aerotropolis, to understand these elements better, context and background information pertaining to what exactly constitutes an aerotropolis and what challenges they present to modern policing must be presented. Therefore, a brief synopsis of the aerotropolis environment, the role it plays within its regional makeup, and the impact it has to global connectivity, the economy, and critical infrastructure is vital to better understand the magnitude of maintaining safety and security. The Aerotropolis is not a new concept but it is a fairly recent phenomenon due to the continued growth of the airline industry and the hub and spoke design adopted by many large commercial air carriers. When Dutch engineers and planners were developing the expansion of the airport in Amsterdam, they were banking on an idea that “the airport leaves the city; the city follows the airport; the airport becomes a city”.³⁰ This concept helped establish Amsterdam Airport Schipol as the world’s first aerotropolis-by-design.³¹

Several airports in the United States are growing at exponential rates and seeing passenger numbers that rival the populations of many major industrial cities.³² They intersect major highways and act as localized city-centers with hotels, shops, entertainment venues, and more. These aerotropoli are more than just airports and are often understood as “detached universes within their own time-space logics,” “spaces of flows,” and “zones of perpetual transit.”³³ Kasarda envisioned this concept when he coined the term Aerotropolis.

An aerotropolis is a metropolitan subregion whose infrastructure, land use, and economy are centered on an airport. Similar in shape to the traditional

³⁰ John D. Kasarda and Greg Lindsey, *Aerotropolis: The Way We'll Live Next* (New York: Farrar, Straus and Giroux, 2011), 20.

³¹ Kasarda and Lindsey, 20.

³² Appold and Kasarda, “The Airport City Phenomenon,” 1244.

³³ Mark B. Salter, *Politics at the Airport* (Minneapolis: University of Minnesota Press, 2008), 108.

metropoli made up of a central city commercial core and its outlying commuter-linked suburbs, the aerotropolis consists of a multimodal airport-based commercial core (airport city) and outlying corridors and clusters of aviation-linked businesses and associated residential developments that benefit from each other and their accessibility to the airport.³⁴

The introduction of the hub and spoke system, created by American Airlines in the early 1980s with the opening of their first hub at DFW, began a revolutionary change in the way people travel by air.³⁵ International airports and commercial air travel connect the far reaches of the world, and since its inception in the early 20th century, it has become the economic engine for many metropolitan areas.³⁶ To adapt to the growth of the air industry, airports have been forced to expand from small single-runway airfields to bustling multi-runway, multi-terminal aerodromes. Most people consider the airport environment to consist only of the terminal and ramp areas where they arrive and depart on aircraft. It is the area most familiar to them and the area of which they are typically speaking when they say they are “going to the airport.” However, many large hub airports have become much more than that. According to Kasarda, airports are often viewed as the area confined to the familiar terminal property that supports passengers embarking and disembarking from airplanes.³⁷ However, just as central cities have not stopped growing past political boundaries, large airports are not confined strictly to air terminals and are instead classified into three main symbiotic components.

The first component, the airport’s functional form, is often unobserved as being part of the central airport structure. This functional form is the consortia of reliant firms and businesses within the airport’s commercial reach that are at least partially dependent on the aviation industry or the airport for economic reasons.³⁸ The second component is

³⁴ John D. Kasarda, “Aerotropolis,” in *The Wiley Blackwell Encyclopedia of Urban and Regional Studies*, ed. Anthony M. Orum (Atlanta: American Cancer Society, 2019), 1–7, <https://doi.org/10.1002/9781118568446.eurs0436>.

³⁵ Kasarda and Lindsey, *Aerotropolis*, 92.

³⁶ “Economic Impact Study,” Airports Council International—North America, accessed November 6, 2020, <https://airportscouncil.org/intelligence/economic-impact-study/>.

³⁷ Kasarda, “Aerotropolis.”

³⁸ Kasarda.

the spatial form, which consists of the many business developments within the airport boundary that are easily recognizable as being airport-related or as part of the central airport structure.³⁹ This form is what most people consider when they think of an airport. The third and final component of the airport environment is its connections and linkages. This component consists of an intermodal collection of transportation infrastructures that shape the use of the airport and its connectivity to other regions, including highways, railways, and air routes.⁴⁰ As shown in Figure 1, all these interdependent components make up the aerotropolis environmental structure.

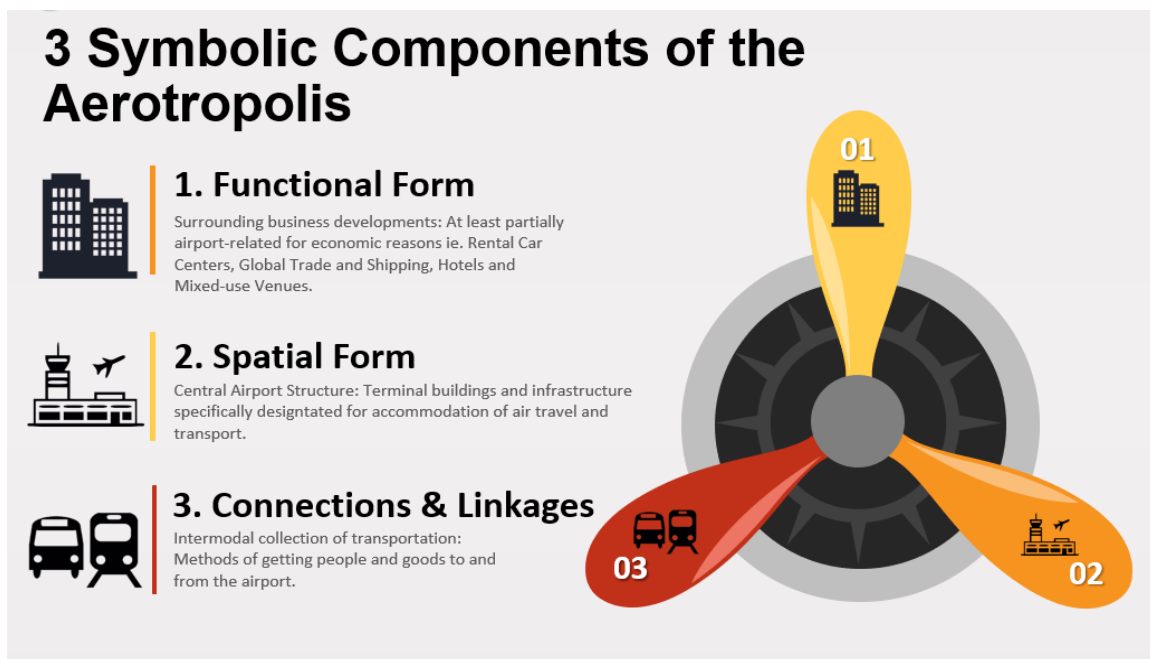


Figure 1. Three Symbolic Components of the Aerotropolis.⁴¹

This infrastructure has developed over time to become just as big and prevalent as many city centers in large metropolitan areas, to include economic impact and population. At nearly 300,000 passengers and 60,000 employees, Atlanta Hartfield-Jackson's daily

³⁹ Kasarda.

⁴⁰ Kasarda.

⁴¹ Source: Kasarda.

population rivals that of the population of St. Louis, Missouri, and over five times the daily attendance of Disney's Magic Kingdom.⁴² In 2018, DEN's total revenues surpassed 33 billion dollars for the year.⁴³ In comparison, this economic impact is similar to the entire gross domestic product of the countries of Estonia, Latvia, and Bahrain.⁴⁴

One major difference between large airports and other large cities is permanent residency. While large metropolitan cities have fixed and established residences, large airports are primarily transient and strictly non-resident populations. An international airport is a city like any other city, except it consists of 100,000 strangers and a critical transportation infrastructure. While many business travelers may think they live at airports, most people in an airport terminal at any given time may very well never see each other again.

These large airports are major players in local and global economies. In 2017, U.S. commercial airports supported over 11 million jobs and produced a total economic output of over \$1.4 trillion.⁴⁵ As the growth of these airports continues, it will bring more business and more economic opportunity, which leads to more people utilizing airports, for either travel, employment, or recreation. Airports Council International predicts that global air travel will double by the year 2034.⁴⁶ As a byproduct of this growth and influx of people and property, the economic impact will continue to rise. However, more people and more money bring higher crime rates that eventually lead to a greater need to increase public safety and security.

⁴² Josie Mumm, "8 Fascinating Facts about the Busiest Airport in the World," Business Insider, accessed October 26, 2020, <https://www.businessinsider.com/atlanta-airport-facts-busiest-in-world-2019-5>.

⁴³ Michael Karlik, "DIA Economic Impact at \$33.5 Billion," Colorado Politics, accessed October 26, 2020, https://www.coloradopolitics.com/denver/dia-economic-impact-at-33-5-billion/article_b36b6406-3d20-11ea-8131-6334aa7d2924.html.

⁴⁴ "GDP by Country," Worldometer, accessed October 26, 2020, <https://www.worldometers.info/gdp/gdp-by-country/>.

⁴⁵ Airports Council International—North America, *Taking America beyond the Horizon: The Economic Impact of U.S. Commercial Airports in 2017* (Washington, DC: Airports Council International—North America, 2018), 5, <https://airportscouncil.org/wp-content/uploads/2018/11/2018EconomicImpactStudy-FINAL.pdf>.

⁴⁶ Airports Council International—North America, "Economic Impact Study."

B. AIRPORT CRIME TRENDS

The 1967 President’s Commission on Law Enforcement and Administration of Justice proclaimed, “there is much crime in America, more than ever reported, far more than ever is solved, far too much for the health of the nation.”⁴⁷ Today, crime continues to occur wherever people and high-value commodities are present. In a Bureau of Justice Statistics survey between 2004–2008, nearly half of all violent crimes and a quarter of all property crimes occurred in commercial places, parking lots, and open public areas like airports and public transportation.⁴⁸ Law enforcement agencies are federally mandated to provide public safety at all major airports, and yet, crime still continues to happen.

Airports are known as highly valuable critical infrastructure threatened by both crime and terrorism.⁴⁹ However, when it comes to crime rates at major international airports, it is difficult to gather statistics and numbers. Based on the Federal Bureau of Investigation (FBI) and the Bureau of Justice Statistics (BJS), crime rates, especially those involving violent crime, in the United States are considerably lower now than they were in the 1990s.⁵⁰ One survey shows crime rates at airports exceed the national average, especially in the business areas and transit stations surrounding the airport terminals.⁵¹ Currently, hardly any organization is dedicated to the collection of airport crime data with most airports either not reporting, or statistics being included in overall city crime totals, which makes it difficult to isolate those occurring at airports from the rest occurring across the

⁴⁷ *United States Congress House Committee on the Judiciary Subcommittee No. 5, Law Enforcement Assistance Administration: Hearings*, House of Representatives, 93rd Cong., 1st. sess., 1973, 1.

⁴⁸ “Detailed Place of Occurrence for Violent and Property Crimes, Average Annual 2004–2008,” Bureau of Justice Statistics, accessed November 1, 2020, <https://www.bjs.gov/index.cfm?ty=tp&tid=44>.

⁴⁹ Government Accountability Office, *Transportation Security Information Sharing, Stakeholders Generally Satisfied but TSA Could Improve Analysis, Awareness, and Accountability*, GAO-12-44 (Washington, DC: Government Accountability Office, 2011), 43, <https://www.gao.gov/assets/590/586430.pdf>.

⁵⁰ John Gramlich, “What the Data Says (and Doesn’t Say) about Crime in the United States,” Pew Research Center, November 20, 2020, <https://www.pewresearch.org/fact-tank/2020/11/20/facts-about-crime-in-the-u-s/>.

⁵¹ Gary Stoller, “Study: Crime Risk near Airports Exceeds National Average,” *USA Today*, July 12, 2011.

city.⁵² A few airports fall into a category of having their own law enforcement authority that reports to the FBI's Uniformed Crime Report. This type of reporting makes it easier to study crime at those specific airports but does not help when trying to compare airport-to-airport, or overall airport crime. While it may be difficult to collect data on international airport crime, it is well known that crime is occurring.⁵³

A *USA Today* study on national crime trends showed that a person was four times more likely to be a victim of a crime at an airport terminal than on an average street corner.⁵⁴ At some airports like Philadelphia and Newark, the numbers were even greater at almost eight times the national average of crime victimization.⁵⁵ While the number of violent crimes may not be as high as in certain metropolitan areas, the large quantity of parked vehicles and travelers carrying luggage, as well as a primarily transient population, make a prime environment for opportunity crimes like burglary, theft, and robbery.⁵⁶

This is not to say that major crimes do not occur at major airports. Drug and human trafficking have become a primary focus for airport administrations, which has led several airport organizations, including the International Air Transportation Association (IATA), to commit to taking action against trafficking.⁵⁷ According to the U.S. State Department, a large percentage of the 50,000 people trafficked in the United States each year will travel through a major U.S. airport.⁵⁸ Illegal drug trafficking has also become a national crisis. Most drug trafficking originates outside the United States and traffickers are using

⁵² Randy Kraft, "Newark, JFK and Phila. Airports Top Crime List," *The Morning Call*, February 26, 1995, <https://www.mcall.com/news/mc-xpm-1995-02-26-3018910-story.html>.

⁵³ Brian Michael Jenkins, "Airport Violence—Not a New Phenomenon," RAND, November 2, 2013, <https://www.rand.org/blog/2013/11/airport-violence-not-a-new-phenomenon.html>.

⁵⁴ "USA Today Study: Crime Risk Higher near Airports, Central Train Stations," CBS DFW, July 12, 2011, <https://dfw.cbslocal.com/2011/07/12/study-crime-risk-higher-near-airports-central-train-stations/>.

⁵⁵ Gary Stoller, "Crime Lurks Outside Airports, Rail Stations," *USA Today*, July 12, 2011.

⁵⁶ Stephen Jarrell and Roy M. Howsen, "Transient Crowding and Crime: The More 'Strangers' in an Area, the More Crime Except for Murder, Assault and Rape," *American Journal of Economics & Sociology* 49, no. 4 (October 1990): 483–94, <https://doi.org/10.1111/j.1536-7150.1990.tb02476.x>.

⁵⁷ "Human Trafficking (HT)," International Air Transport Association, accessed October 30, 2020, <https://www.iata.org/en/policy/consumer-pax-rights/human-trafficking/>.

⁵⁸ Juliana Petani, "Human Trafficking in Aviation: On the Responsibility to Report and Who Exactly Is Responsible," *Globus: University of San Francisco*, November 2019, <https://www.usfca.edu/journal/globus/winter-2020-13>.

commercial airlines, the fastest and most reliable transportation mode, to get illegal drug shipments into the country.⁵⁹

Another reason for higher crime rates at airports is the strict rules on carrying weapons and other prohibited items.⁶⁰ Those who have traveled by commercial airliner understand the tight security process of the TSA checkpoint. When all passengers and luggage are required to go through administrative searches and screening, the likelihood of finding these prohibited items increases. According to the TSA, in 2019, nearly 4,500 firearms were located being brought through airport screening checkpoints either in carry-on bags or on the passengers themselves.⁶¹ Atlanta's Hartsfield-Jackson, DFW, DEN, and George Bush Intercontinental in Houston were the top airports where weapons were located. All these airports would be considered aerotropoli.⁶²

While these crimes are occurring at major airports, law enforcement agencies dedicated to providing safety and security are challenged in their attempts to reduce and prevent these crimes to provide a safer and more customer-friendly experience for the traveling public. Metropolitan police agencies often rely on a quantitative analysis of crime, and study extrinsic variables like routine activities and social interactions within the population presiding in their jurisdiction to help reduce offenses and to distribute resources better.⁶³ Qualitative analytics may work well in a well-defined population; however, at major airports, it is problematic due to the transient nature of the populous, both the traveling and the general public. The employee population at these airports would constitute the only non-transient group able to be assessed for crime prevention measures.

⁵⁹ Kathleen Mahoney, "Drug Trafficking at Airports—The Judicial Response Comment," *University of Miami Law Review* 36, no. 1 (1981): 91.

⁶⁰ "Carrying a Weapon or Explosive on an Aircraft," Department of Transportation, Code of Federal Regulations, title 49 (1994 comp.): 46505.

⁶¹ "Number of Guns Brought to Airport Checkpoints in 2019 up 5 Percent," Transportation Security Administration, January 15, 2020, <https://www.tsa.gov/news/press/releases/2020/01/15/number-guns-brought-airport-checkpoints-2019-5-percent>.

⁶² Transportation Security Administration.

⁶³ Sherry Towers et al., "Factors Influencing Temporal Patterns in Crime in a Large American City: A Predictive Analytic Perspective," *PLoS One; San Francisco* 13, no. 10 (October 2018): 2, ProQuest.

This population provides an equally difficult challenge in preventing insider threats and internal crime.

At times, the greatest threat to an airport is the airport employees themselves. Airport security, by design, is made to keep potential threats, such as hijackers and explosive devices from entering an aircraft. However, the airport security environment has varying gaps that make it susceptible to subversion and exploitation by airport and airline employees with certain access privileges.⁶⁴ In 2018, 10 airline workers at DFW were indicted after an undercover sting operation on charges of smuggling illicit substances and narcotics onto departing aircraft.⁶⁵ The operation ended and the suspects were arrested when the employees agreed to smuggle explosives onto an aircraft.

All these crimes have a detrimental cost involved. Whether it be in loss of life, man hours trying to prevent or solve the crimes or cost to the passengers, airports, concessionaires, and airlines in lost revenue. Reducing and preventing crime and terrorism at major airports is something that has to happen to keep these economic engines running and operating at full capacity.

C. EFFECTS OF A CATASTROPHIC EVENT

International airports provide an unrivaled network of travel and commerce vital to national and global prosperity. The high value of this network presents a prime target for terrorist organizations.⁶⁶ Large congregations of people in ticketing queues, baggage claims, and checkpoints often create opportunities for active killing attacks that potentially results in a catastrophic loss of life.⁶⁷ This loss of life was seen in the 1972 Lod

⁶⁴ Alan Black, "Managing the Aviation Insider Threat" (master's thesis, Naval Postgraduate School, 2010), 1. <http://hdl.handle.net/10945/5039>.

⁶⁵ Stephen Young, "Workers at DFW Busted for Moving Fake Meth after Agreeing to Move Real C-4," Dallas Observer, May 16, 2018, <https://www.dallasobserver.com/news/dfw-airport-employee-smuggling-ring-busted-by-feds-10694242>.

⁶⁶ Abdollah Shafieezadeh, Eun J. Cha, and Bruce R. Ellingwood, "A Decision Framework for Managing Risk to Airports from Terrorist Attack," *Risk Analysis* 35, no. 2 (2015): 292, <https://doi.org/10.1111/risa.12266>.

⁶⁷ Linda JAshari, "Soft Target Security: Environmental Design and the Deterrence of Terrorist Attacks on Soft Targets in Aviation Transportation," *Homeland Security Affairs* XVI (March 2018), <https://www.hsaj.org/articles/14522>.

International Airport Attack in Tel Aviv, Israel, and the 1985 Rome and Vienna Airport attacks where congregations of passengers were targeted.⁶⁸ Causing any kind of delay or interruption in flight operations at a single airport can cause a ripple effect that can greatly hinder the entire network and have major economic impacts. Thus, as seen in Figure 2, terrorist organizations have sought to target large airports and commercial air travel in high-profile attacks to bring fear and hesitation to the flying public and severe economic loss to the nation while security agencies have been reactive in addressing these incidents.⁶⁹

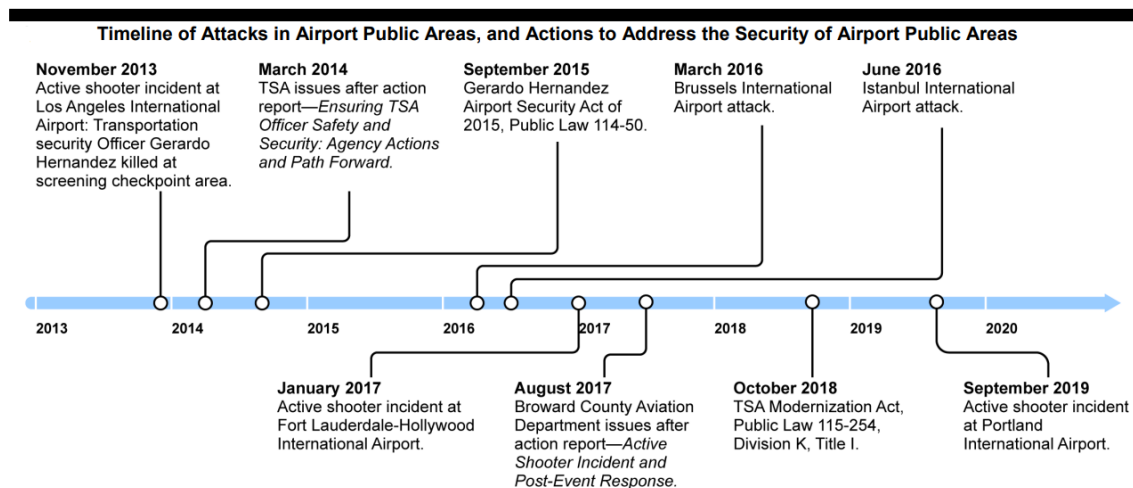


Figure 2. Timeline of Attacks in Airport Public Areas, and Actions to Address the Security of Airport Public Areas.⁷⁰

The devastation of the attacks on September 11, 2001 that originated at three major U.S. airports, motivated legislation to enhance the security and safety of the complex and

⁶⁸ Jeffrey Price and Jeffrey S. Forrest, *Practical Aviation Security: Predicting and Preventing Future Threats* (Oxford, United States: Elsevier Science & Technology, 2013), 51, <http://ebookcentral.proquest.com/lib/ebook-nps/detail.action?docID=1107824>.

⁶⁹ Aaron Hutchins, “Why Do Terrorists Target Airports So Frequently?,” *Maclean’s*, January 6, 2017, <https://www.macleans.ca/news/world/why-do-terrorists-target-airports-so-frequently/>.

⁷⁰ Source: Government Accountability Office, *Aviation Security, TSA and Airport Stakeholders Have Enhanced Airport Public Area Security, but a Plan Is Needed for Future Collaboration*, GAO-20-278 (Washington, DC: Government Accountability Office, 2020), 16, <https://www.gao.gov/assets/710/704490.pdf>.

critical airport infrastructure. This legislation was in part due to the prolific and detrimental cost of the 9/11 attacks and what future attacks on airports would cost the nation if not prevented. It is now known what the effects of a catastrophic event like 9/11 can have on the world when all major airports are effectively closed for an extended period of time. It is something everyone hopes to never experience again. However, just causing a simple delay at a single airport that lasts a few hours can have a critical impact on airports and airlines.⁷¹

The Logistics Management Institute (LMI) has created an analytical solution to estimating the cost of delays at airports within the National Airspace System (NAS) called LMINET. Using airport capacity models, along with over 14 other parameters including weather conditions, technology and procedural changes, LMI can estimate delay times caused by varying circumstances and delay costs to airports and airlines.⁷² In 2010, airports within the NAS experienced 2.61 million hours of delays throughout the year. This number equated to approximately \$7.8 billion in lost revenue.⁷³ In other words, every hour of delay at an airport costs the airlines \$3,000 per plane. At most major airports, it is not uncommon to have over 100 aircraft on the ground either embarking or disembarking passengers. Even a minor incident causing only a few hours of delay to the airport has the potential to cost over \$500,000 even without major damage and no loss of life. These factors demonstrate the importance of protecting the operations of these large airports from any threat that may cause interruptions and delays.

Several organizations within government, industry, and academia have provided methodology for calculating and assessing risk to airports from both natural causes and man-made events like terrorism.⁷⁴ Managing these risks is essential to maintaining the

⁷¹ Terrorist attacks are an obvious cause of major disruption to airlines and airports. However, even events like winter weather, hurricanes, and surrounding road construction projects can drastically impact operations and access to the airport. These events routinely cause delays ranging from hours to days depending on the severity and duration.

⁷² Peter F. Kostiuk, Eric Gaier, and Dou Long, *The Economic Impacts of Air Traffic Congestion* (Tysons Corner, VA: Logistics Management Institute, 1998), 4.

⁷³ Kostiuk, Gaier, and Long, 6.

⁷⁴ Shafieezadeh, Cha, and Ellingwood, "A Decision Framework," 304.

functionality and operational stability of the aviation network. In determining the risk of attack, human behavior, as well as the potential cost and consequence of the event, is calculated. In these assessments, it is determined that the feasibility of specific human-based threats is reduced when countermeasures, such as high-visibility deterrence, behavioral detection operations, and increased screening and surveillance technologies, are implemented.⁷⁵

D. CONCLUSION

The Aerotropolis is a highly complex environment essential to modern society because of its vast impact on the global economy, transportation, and tourism.⁷⁶ Exceeding beyond the familiar structures of the terminal gates and ramp areas, this venue extends to industrial, commercial, and mixed-use zones that both support the airport and rely on the airport for business. These aerotropoli are expanding to become self-sufficient and independent metropolitan centers that help drive the economy of the major cities they inhabit. The populations alone at any given time at these major airports rival the numbers of many large cities and the only difference is that the airport population is highly transient and does not reside on airport property. It is important to understand the complexity and diversity involved in the aerotropolis landscape to appreciate the difficulties involved in keeping it safe and secure.

Crime and terrorism are significant concerns to airport administrations, stakeholders, and law enforcement agencies sworn to protect these infrastructures. Crime rates at large international airports are difficult to calculate, but as crime rates rise, more effort is needed in reduction and prevention methods and programs. Airport police agencies dedicated to providing law and order must be able to adapt as the industry advances, and these aerotropoli grow in size and population to keep the network operation running smoothly and preventing catastrophic loss.

⁷⁵ Shafieezadeh, Cha, and Ellingwood, 301.

⁷⁶ Shafieezadeh, Cha, and Ellingwood, 298.

As experienced in the aftermath of the attacks on 9/11, airports are vulnerable targets of opportunity to terrorist organizations. The cost of the 9/11 attacks was detrimental both in loss of life and in economic impact. These attacks were the catalyst in the creation of new legislation and government institutions charged with preventing another attack of that magnitude. However, even minor delays caused by criminal activity or other lesser incidents, can also have a damaging impact on airports and airlines that cost them millions in lost revenue.

With the complexity of the aerotropolis environment and the critical role it plays in the global arena, the need for effective law enforcement is amplified. The crimes experienced at large airports, while similar in nature to other metropolitan areas, differs in their ability to be mapped, analyzed, and evaluated for preventative measures. Transient criminality makes many of the current policing models used by other city agencies difficult to adapt to the airport environment.⁷⁷ The threat of terrorism alone constitutes a need for a strong deterrence, detection, and defensive strategy different from most metropolitan cities. A new model designed specifically for protecting the aerotropolis may be of value to agencies dedicated to policing this environment.

⁷⁷ McGray, "Airport Policing in the 21st Century."

IV. AEROTROPOLIS POLICING

A. DEFINITION

The aerotropolis, as it has been defined, is a complex symbiotic ecosystem with business and mixed-use districts surrounding a large international airport at its epicenter.⁷⁸ Therefore, aerotropolis policing is a term developed to identify the specific responsibilities, requirements, and methods employed exclusively by aerotropolis law enforcement agencies to provide effective public safety and security services in this unique and complex environment. This method of policing includes, not only the critical infrastructure security practices required to keep airport operations running and the traveling public safe and calm, but also the techniques needed to police a modern metropolitan area within the outlying expanses surrounding the airport. Under this policing model, law enforcement agencies responsible for providing public safety to major airports must balance the needs of that airport with many other demands as these airports continue to grow. According to Monteiro:

airport law enforcement personnel find themselves facing a growing multitude of responsibilities, such as deterring, investigating, and preventing crime; performing traffic enforcement; gathering information and intelligence; responding to calls from air carriers and airport operators; and supporting the Transportation Security Administration in screening passengers—all while protecting the airport that has a considerable economic impact on their communities.⁷⁹

The more well-known law enforcement models employed by other metropolitan police agencies may work well in an aerotropolis setting, but must be adapted to fit the unique airport environment if they are to be effective.

Aerotropolis policing is an adaptation of current policing models to suit the unique environment better in which law enforcement officers must police a loosely defined community of passengers, employees, and the general public under the threat of a terrorist

⁷⁸ Kasarda, “Aerotropolis,” 2.

⁷⁹ Monteiro, *Models for Law Enforcement at Airports*, 2.

attack, pandemic proliferation, transient crime, and economic collapse. Technology, training, and resource management play a large role in aerotropolis policing for the purposes of promoting deterrence and facilitating defense against crime and terrorism within the aerotropolis environment; an environment that includes both expansive enclosed indoor spaces and open terrain. Aerotropolis policing is also intended to address legal concerns and requirements that impact transparency and public trust in airport law enforcement. Current methods of policing large international airports consist of trying to deploy current operational models in an environment where those models are inadequate for the policing tasks at hand. It is like trying to force the proverbial square peg into the round hole. Having a specific model designed for policing the aerotropolis would have the benefit of addressing the differences of policing two very different conditions and settings at the same time and make an aerotropolis policing model unique and necessary. The two very different settings in question constitute the dichotomy of the aerotropolis, the critical infrastructure or “aero” portion of the aerotropolis, and the surrounding metropolitan or “tropolis” areas.

B. CRITICAL INFRASTRUCTURE PROTECTION (AERO)

The critical infrastructure of an airport is a complex security system of interconnected public and restricted areas utilizing a vast range of equipment, technology, procedures, and operational approaches to provide a safe environment for the traveling public.⁸⁰ The terminology of the different components alone can become confusing when considering they are classified into two sectors, “land” and “air.” The land side consists of the public roadways, business, and “non-sterile” portions of the terminals; “sterile” is the term used to denote an area that cannot be entered without inspection or specific credentials. The air side consists of the sterile concourse, along with the aircraft operations areas and any other area not accessible to the general public.⁸¹ As shown in Figure 3, these two sectors are broken down further into the public areas and sterile concourse of the

⁸⁰ Program for Applied Research in Airport Security, *Recommended Security Guidelines for Airport Planning, Design, and Construction* (Washington, DC: Transportation Security Association, 2017), 1.

⁸¹ Jeffrey C. Price, *Airport Certified Employee (ACE)—Security: Module 2: Airport Security* (Alexandria, VA: American Association of Airport Executives, 2015), 66.

terminal buildings, the secure areas of the ramp and apron, the movement and non-movement areas of the airport operations area (AOA) and any security identification display areas (SIDA) within these components.⁸² Many of these areas overlap or are marked with more than one of these designations. For example, the apron around a terminal where aircraft park may be considered an air side, non-movement SIDA zone located within the overall AOA.

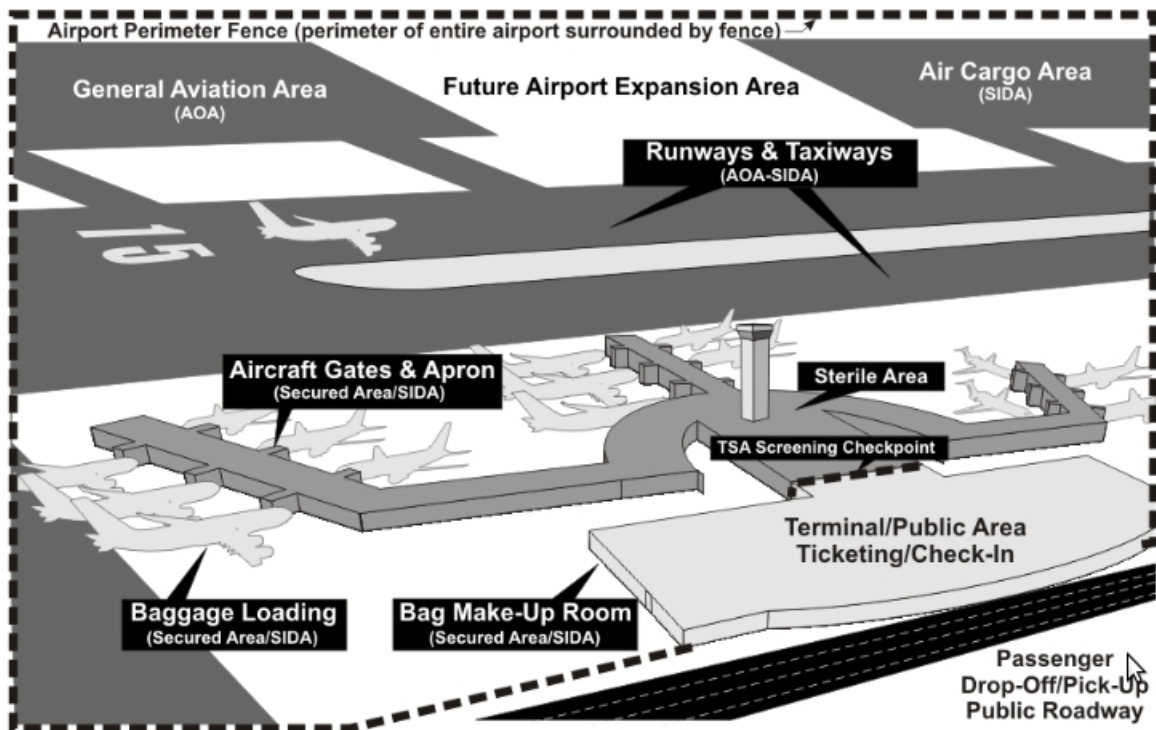


Figure 3. Public and Secure Areas of Major Airports.⁸³

Large airports are typically also separated into commercial, cargo, and general aviation spaces, each governed by different rules and regulations. Some major airports also have a military airbase attachment as well, which complicates things even further. One vital aspect of major international airports that often is overlooked is that they are also

⁸² Price, 82.

⁸³ Source: “TSA Airport Access Security Requirements,” Aircraft Owners and Pilots Association, October 10, 2018, <https://www.aopa.org/advocacy/airports-and-airspace/security-and-borders/tsa-airport-access-security-requirements>.

national points of entry. Therefore, some areas of these airport terminals are considered international territory, which raises important jurisdictional issues. The law enforcement officers responsible for airport policing must be very familiar with each of these areas and boundaries. Understanding the unique laws and regulations that apply to them, and what—or who—is allowed or prohibited within them can be complicated and typically takes time, experience, and additional training to master.⁸⁴

This complex system merits the need for a highly trained and well-equipped police force. The threat of terrorism alone warrants having an adequate force to deter and prevent an attack. However, legislation has gone further to ensure these infrastructures are well protected. U.S. Code of Federal Regulations title 49 sec. 1542 details the federal mandates regarding airport security and the general requirements for all major U.S. airports to have a certified airport security program including what the program shall entail.⁸⁵ In sec. 1542.215, the code states that “each operator required to have a security program must provide:

- Law enforcement personnel in the number and manner adequate to support its security program;
- Uniformed law enforcement personnel in the number and manner adequate to support each system for screening persons and accessible property required, except to the extent that TSA provides Federal law enforcement support for the system.⁸⁶

By definition, each aerotropolis in the United States falls under the regulations of this code and is required by law to provide a sufficient law enforcement presence within the airport proper. The code goes on to address the requirements of law enforcement

⁸⁴ Price, 11.

⁸⁵ “Transportation,” Department of Transportation, Code of Federal Regulations, title 49 (1994 comp.): 1500, https://www.ecfr.gov/cgi-bin/text-idx?SID=d8c792fadd66faf6b6c35959ed0e2a3e&mc=true&tpl=/ecfrbrowse/Title49/49cfrv9_02.tpl#1500. See Appendix.

⁸⁶ Government Printing Office, § 1540.303, *Part 1542—Airport Security* (Washington, DC: Government Printing Office, n.d.), 340, accessed August 19, 2020, <https://www.govinfo.gov/content/pkg/CFR-2010-title49-vol9/pdf/CFR-2010-title49-vol9-part1542.pdf>.

personnel to include having full arrest authority, being easily identifiable, armed, and having completed a specified training program sufficient for state licensure.⁸⁷

In most U.S. states, the state police agency or county sheriffs provide enforcement of criminal laws within unincorporated jurisdictions. While obligated to support some law enforcement presence, the state and the local sheriff's office do not have a specifically mandated number of personnel they are required to provide municipalities.⁸⁸ Major airports differ from other metropolitan cities in this aspect. Most incorporated areas have a dedicated police department because taxpayers have agreed to pay for services to ensure a faster response and adequate public safety. At airports, dedicated police officers in adequate numbers provide effective policing and quick response because federal law mandates it.

The benefit of having dedicated law enforcement officers patrolling an airport may be questioned. Why not instead have officers from a nearby city or host county agency respond if needed, as they would provide services to a home or business within their jurisdiction? To answer that question, look at studies of dedicated school resource officers (SROs). Much like airport police, SROs are assigned to enforce state laws on school premises, address disciplinary issues, and act as a crime deterrent by patrolling school campuses. SROs have specialized training and unique knowledge of the areas for which they are responsible.⁸⁹ Airport police officers and SROs have many similarities. Both have "campus police" job functions, require specialized training, and their employment is based on how their jurisdiction—a school—is owned and operated, either by local government or board authority. In a 2006 FBI Law Enforcement Bulletin, Peter Finn discusses four primary benefits to having specialized SROs patrolling schools:

- Reduced workload for officers in surrounding jurisdictions

⁸⁷ Department of Transportation, "Transportation."

⁸⁸ Deborah Spense, Barbara Webster, and Edward Conners, *Guidelines for Starting and Operating a New Police Department* (Washington, DC: Office of Community Oriented Policing Department of Justice, n.d.), 4, accessed November 11, 2020, <https://cops.usdoj.gov/RIC/Publications/cops-p109-pub.pdf>.

⁸⁹ "FAQ: What Is a School Resource Officer?," National Association of School Resource Officers, accessed November 15, 2020, <https://www.nasro.org/faq/>.

- Improved image among juveniles
- Better police-school relationships
- Enhanced agency reputation⁹⁰

The same can be said about airport police. Having dedicated officers patrolling the airport environment reduces workload and provides better resource management by having officers remain on port instead of responding to calls across the rest of the city. Having dedicated police on the airport grounds can reduce and possibly eliminate some emergency calls due to deterrence. While deterrence is difficult to measure, having a strong officer presence in an area has an effect of reducing crime.⁹¹ Having these police officers remain within the specific locale also reduces response times, increases police proactivity, and frees up officers in other districts from having to respond. Airport police create an improved image among the traveling public when they see officers in the area keeping them safe and providing customer service. Much like the SRO program, collaboration with teachers and school administrators, having airport officers work with other airport business and stakeholders to build a safer and more secure airport environment, creates a better police-airport relationship and enhances the overall agency reputation.⁹²

While crime prevention and counter terrorism are key priorities of airport policing, another aspect of serving in this atmosphere is providing effective customer service and enhancing the customer experience for the millions of passengers who travel through the airport each year. Answering questions, assisting airlines with passenger complaints, and directing people where to go when they are lost, are just a few of the many additional things that make police officers within the airport more like a concierge with a gun. This concept of law enforcement has been defined as “reassurance policing” where officers provide a

⁹⁰ Peter Finn, “School Resource Officer Programs: Finding the Funding, Reaping the Benefits,” *FBI Law Enforcement Bulletin* 75, no. 8 (August 2006): 1–7.

⁹¹ Steven Mello, *More COPS, Less Crime* (Princeton, NJ: Princeton University, 2019), 29.

⁹² Government Accountability Office, *Aviation Security, TSA and Airport Stakeholders*, 11.

positive value to the area through helpful and reassuring experiences with the public.⁹³ Having the demeanor to interact with the public in a positive way affords a better flying experience and keeps people coming to the airport for their travel needs. This customer service role is becoming even more prevalent as many major airport terminals are being transformed and designed more like high-end shopping malls and entertainment venues.⁹⁴

Many airports in Europe pioneered the design of putting money-making concessions and shops into their terminals to attract the traveling public into making purchases while they wait for flights.⁹⁵ American airports have taken this approach a step further and created the mega-mall atmosphere with luxury shopping, hotels, entertainment, and a wide variety of restaurants and bars. Policing this mall-like terminal environment may be good for foot patrol with a balmy 70-degree temperature year-round. It also creates ample opportunities for shoplifting and customer complaints. Also, the abundance of alcohol served at airport terminals could compete with some cruise ships. Most airport terminals have multiple bars and restaurants, some serving alcohol 24 hours a day.⁹⁶ This scenario leads to an influx of intoxication offenses and arrests.

Finally, the issue of the transient population creates its own challenges to airport policing, with hundreds of thousands of passengers traversing the airport every day and a large homeless population attracted to airports for their survival utilities.⁹⁷ Due to the majority of the population being relative strangers, they are more inclined to commit crime and are typically less engaged in community participation.⁹⁸

⁹³ Richard Rowland and Timothy Coupe, "Patrol Officers and Public Reassurance: A Comparative Evaluation of Police Officers, PCSOs, ACSOs and Private Security Guards," *Policing & Society* 24, no. 3 (June 2014): 265–84, <https://doi.org/10.1080/10439463.2013.784300>.

⁹⁴ Janet R. Bednarek, *Airports, Cities, and the Jet Age: U.S. Airports since 1945* (New York: Palgrave Mcmillan, 2016), 139.

⁹⁵ Bednarek, 138.

⁹⁶ Marcus Gilmer, "Airport Boozing Goes 24/7," *The Chicagoist*, July 28, 2010, <https://chicagoist.com/article/undefined>.

⁹⁷ Kim Hopper, "Symptoms, Survival, and the Redefinition of Public Space: A Feasibility Study of Homeless People at a Metropolitan Airport," *Urban Anthropology and Studies of Cultural Systems and World Economic Development* 20, no. 2 (1991): 155.

⁹⁸ Jarrell and Howsen, "Transient Crowding and Crime," 484.

The many components of the critical infrastructure of airports create a challenge to law enforcement agencies. The myriad of airport regulations and restrictions related to each section of the system requires specialized knowledge and expertise. Federal law has specific regulations requiring a sufficient, well-trained police presence within the airport. As terminals continue to be transformed into high-end shopping malls with expensive merchandise to be stolen and plenty of bars and pubs to keep travelers well imbibed between flights, the role of the airport police officer will continue to become more challenging.

The major airport within the aerotropolis system is the most heavily populated area with the most economic impact and the most to lose in the event of a major incident. This spatial form is typically the prime focus of aerotropolis policing, and the demanding people-oriented environment requires added patience and empathy.⁹⁹ This is not to say the functional form and linkages are not important and do not warrant proper policing. Law enforcement agencies must find a balance in managing the needs of each division and dedicate the necessary focus and resources to each area as needed.

C. METROPOLITAN POLICING (TROPOLIS)

Policing the functional form and linkages of the surrounding business complex of the aerotropolis is very similar to traditional policing elsewhere. Officers responsible for these areas answer emergency calls, work patrol districts, and enforce traffic laws comparable with policing an industrial campus in any other major city. Traditional policing refers to the myriad of different approaches and practices used by law enforcement agencies to preserve the peace and maintain public order.¹⁰⁰ As Lippert and Walby state, traditional policing can be defined as “a varied set of practices enlisting an array of technologies, practices, spaces and persons to accomplish numerous order maintenance objectives, with complex consequences and implications.”¹⁰¹

⁹⁹ Robert T. Raffel, “Airport Policing,” *FBI Law Enforcement Bulletin*; Washington 70, no. 9 (September 2001): 27.

¹⁰⁰ Randy K. Lippert and Kevin Walby, eds., *Policing Cities: Urban Securitization and Regulation in a Twenty-First Century World* (New York: Routledge, 2013), 1.

¹⁰¹ Lippert and Walby, 1.

The surrounding metropolitan business complex is typically made up of large warehouse structures, transportation and supply chain-related businesses, mass transit stations and mixed-use shops, and hotels and restaurants.¹⁰² These districts tend to attract typical property crimes like burglary, vandalism, and theft.¹⁰³

While the industrial climate and demographic composition of the metropolitan complex surrounding the airport is similar in makeup to other business and mixed-use areas of major cities, it is still unique due to the port atmosphere and close proximity to the major international airport. The primarily work-related nature of the population within this district can create a lack of ownership and engagement in the environment. These feelings can lead to a lack of community interest in investing in or protecting these surroundings. Research has shown that some of the highest crime rates occur within central urban business districts.¹⁰⁴ These crime rates could potentially lead to spiraling decay and an increase in social decline if not properly policed. This concept is the key focus of Wilson and Kelling's broken windows theory.¹⁰⁵

Broken windows theory has become embedded vocabulary within criminal justice and criminological academia and has outlined many metropolitan law enforcement agency's policy and practices regarding policing within their jurisdictions.¹⁰⁶ The idea that a broken window left unrepaired will lead to urban decay and social decline has guided efforts in policing for the last 30 years.¹⁰⁷ Studies in urban policing and even adjacent fields often involve varying viewpoints of this theory and use it to explain social

¹⁰² Kasarda and Lindsey, *Aerotropolis*.

¹⁰³ Valerie Johnston et al., *Crime on Industrial Estates* (London: Police Research Group, 1994), 9.

¹⁰⁴ Jarrell and Howsen, "Transient Crowding and Crime," 487.

¹⁰⁵ George L. Kelling and James Q. Wilson, "Broken Windows," *The Atlantic*, March 1, 1982, <https://www.theatlantic.com/magazine/archive/1982/03/broken-windows/304465/>.

¹⁰⁶ Brandon C. Welsh, Anthony A. Braga, and Gerben J. N. Bruinsma, "Reimagining Broken Windows: From Theory to Policy," *Journal of Research in Crime and Delinquency* 52, no. 4 (July 1, 2015): 448, <https://doi.org/10.1177/0022427815581399>.

¹⁰⁷ Welsh, Braga, and Bruinsma, 488.

phenomena and trends. However, these studies often “talk past each other” and fail to take other variables and commonalities into consideration.¹⁰⁸

The policies involved in policing urban areas should consider broken windows when identifying problem locations and maintaining order. Policing the metropolitan areas of the aerotropolis is no different. Ensuring the appearance of order maintenance and prosperity in these industrial areas should have a positive effect on crime rates and urban decline. Broken windows should be one of the models adapted and employed in securing and safeguarding the surrounding metropolitan complex. Utilizing broken windows to maintain order and reduce crime may be easier on an airport property when considering the concept was developed to improve community life in urban neighborhoods where crime and disorder were usually “inextricable linked.”¹⁰⁹ Due to the airport environment being free of permanent residents and more of a business district atmosphere, disorder is less predominant and easier to observe and address. It may not attain the same level of community investment and engagement as a neighborhood setting. However, it is still a place of business that warrants a level of constant maintenance and upkeep. As stated before, agencies also need to look at other mitigating factors and foci when enlisting resources, practices, and policy in policing these areas.

D. OWNERSHIP AND GOVERNANCE

How an airport is owned and governed affects how it is operated and regulated.¹¹⁰ An airport can be owned and operated in several different ways with each having its own benefits and challenges that becomes more apparent in Chapter V’s comparative study. Most airports in the United States are owned and operated at the local level. Of the 550 airports in the United States designated for commercial air travel, nearly 200 are owned by municipalities and almost 100 are operated at the county level.¹¹¹ In other words, city or

¹⁰⁸ Lippert and Walby, *Policing Cities*, 3.

¹⁰⁹ Kelling and Wilson, “Broken Windows.”

¹¹⁰ International Civil Aviation Organization, *Governance, Ownership and Control of Airports* (Montreal: International Civil Aviation Organization, 2008).

¹¹¹ Bednarek, *Airports, Cities, and the Jet Age*, 50.

county law enforcement officers police over half of all airports in the country. Having an airport policed by a local city or county agency creates a policing environment in which the airport is only one of many districts or specialty areas within the department that officers may be assigned as a duty assignment. Budgeting is one significant difference between locally controlled airports and other city or county functions. Major airports are self-sustaining and rely on ticket fares, parking fares, landing fees, and other revenue to support operations instead of local city or county taxes.¹¹² DFW actually puts money back into city coffers annually due to tax share agreements with its surrounding city governments.¹¹³ In 2011, DFW contributed to approximately \$63 million in shared tax revenue.¹¹⁴ The significance of being self-sustained from various revenue streams means airports are not reliant on citations and fines from airport police for operational funding like many cities are.¹¹⁵

The second most prevalent type of airport ownership and governance is through independent airport authorities.¹¹⁶ Authority governance is the most dominant form of airport ownership and operation globally, but it is not quite as popular as municipal regulation within the United States.¹¹⁷ While still considered local control, many cities have chosen to transfer ownership and management of an airport to an autonomous port authority to oversee everyday operation. The majority of airport authorities consist of a governing body of appointed board members; they are not directly accountable to

¹¹² Mark Dent, "Why the Philadelphia International Airport Is Run by the City," Billy Penn, December 30, 2015, <https://billypenn.com/2015/12/30/why-the-philadelphia-international-airport-is-run-by-the-city/>.

¹¹³ Dallas City Council, *Dallas City Council Briefing: Commercial Development Land Use Plan and Financial Business Model* (Dallas: Dallas Fort Worth International Airport, 2011), 8, http://www3.dallascityhall.com/council_briefings/briefings0811/DFW-LandUse_080311.pdf.

¹¹⁴ Dallas City Council, 8.

¹¹⁵ Nick Sibilla, "Nearly 600 Towns Get 10% of Their Budgets (or More) from Court Fines," *Forbes*, August 29, 2019, <https://www.forbes.com/sites/nicksibilla/2019/08/29/nearly-600-towns-get-10-of-their-budgets-or-more-from-court-fines/>.

¹¹⁶ Bednarek, *Airports, Cities, and the Jet Age*, 50.

¹¹⁷ Bednarek, 50.

voters.¹¹⁸ Airport authorities have the power to create their own independent law enforcement agency, or in some cases, retain the city, county, or state police agency responsible for the jurisdiction where the airport is located.

The few remaining U.S. airports not controlled by local or authority governments are owned and operated in various other ways. State governments own 10 airports, six airports are controlled by universities and a few smaller airports are privately held.¹¹⁹ Law enforcement responsibility in these outlying airports is typically still maintained at the state or local level.

The specific type of ownership that each airport falls under designates how it is governed and policed. Most airports are small enough in size and operation so that law enforcement responsibility is easy to manage and typically considered a duty station for local agencies. However, major international airports in the United States falling within the definition of aerotropolis require a higher level of policing. This policing not only incorporates providing a policing function within the spatial form of the airport proper, but also across the multiple layers that envelope the aerotropolis system resulting from the number of businesses and people that fall within the purview of the airport. These airports are large enough to be considered cities themselves and must be policed as such. The unique and difficult aspect of aerotropolis policing requires a model that effectively balances the needs of the surrounding metropolitan structures with the requirements of the critical infrastructure.

¹¹⁸ Hunter Bacot and Jack Christine, "What's So 'Special' About Airport Authorities? Assessing the Administrative Structure of U.S. Airports," *Public Administration Review* 66, no. 2 (March 2006): 246, <https://doi.org/10.1111/j.1540-6210.2006.00576.x>.

¹¹⁹ Bednarek, *Airports, Cities, and the Jet Age*, 51.

E. COURT DECISIONS AND COMMUNITY POLICING

A fundamental concern of any democratic policing model is how to balance crime reduction efforts with the civil rights of the people being policed.¹²⁰ This concern is no less important within the aerotropolis and has been continually challenged by case law. The issues debated in the courts have primarily been concerned with government interference and the protection of travelers against violations of their First and Fourth Amendments.¹²¹ Another challenge to airport administrations is the question of whether an airport should be considered a public forum or a private venue, which therefore makes the airport a more restrictive environment.

Even before the attacks of 9/11, the idea of security screening at airports has been challenged in court. The argument was that subjecting people and luggage to magnetometers and x-ray screening was a violation of their rights provided by the Fourth Amendment and therefore unconstitutional. Proponents of airport searches claim the law only protects against unreasonable searches and exceptions under case law have allowed for unwarranted searches. While the law only protects against unreasonable searches, critics argue that because a person may be denied their flight if they refuse to be searched, a level of coercion exists.¹²² The question of airport passenger screening was finally decided in a 1973 U.S. Court of Appeals ruling in *U.S. v. Davis*. The court found that the previous decisions of *Terry* and *Lopez* did not apply to airport searches and seizures.¹²³ However, because of the inherent risk of hijacking, the government did have a responsibility to protect the people through what the court deemed to be reasonable “administrative searches.”¹²⁴ These searches apply, not just at the TSA checkpoint, but extend into the sterile concourse of the airport.

¹²⁰ Ronald D. Hunter, “Three Models of Policing,” *Police Studies: The International Review of Police Development* 13, no. 3 (1990): 118.

¹²¹ Bednarek, *Airports, Cities, and the Jet Age*, 7.

¹²² Bednarek, 236.

¹²³ Bednarek, 237.

¹²⁴ *United States v. Davis*, 482 F. 2d 893, No. 482 F. 2d 893 (U.S. Court of Appeals, 9th Circuit 1973).

This brings up another argument about privacy and the use of closed-circuit television (CCTV) cameras used in nearly every major airport. Proponents of CCTV surveillance contest that because airports hold both a practical and symbolic position in the global network of transportation and trade, they are constantly exposed to different types of risk and are therefore subject to increased security concerns and must be constantly monitored.¹²⁵ Critics argue that being constantly watched and recorded is a violation of privacy, trust, and autonomy.¹²⁶

The Supreme Court decided on the issue of surveillance and privacy in *Katz v. United States*. In *Katz*, the Court's opinion states, "the Fourth Amendment protects people, not places" and in order for a person's privacy to be violated, there must first be a "subjective expectation of privacy" and that expectation must be reasonable from a societal point of view.¹²⁷ The purpose of law enforcement's use of CCTV monitoring within the critical areas of the airport are to protect the airport environment. The threat of organized crime, immigration issues, and even terrorism warrant an immediate need for surveillance and supersedes any expectation of privacy.¹²⁸

The matter of free speech within the airport environment comes into question on occasion and has been an issue of concern in the past. Various charity and religious organizations have often used the airport as a venue for soliciting donations due to the large number of people traveling through at any given time. This issue came to a head in the late 1970s and early 1980s that resulted in several court cases regarding whether the airport should be considered a public forum or a private property. In a 1939 Supreme Court case, *Hague v. Committee for Industrial Organization*, the court ruled against any restrictions of free speech within a public space.¹²⁹ However, in the Supreme Court case *International*

¹²⁵ Salter, *Politics at the Airport*, 105.

¹²⁶ "Surveillance Ethics," Internet Encyclopedia of Philosophy, accessed November 27, 2020, <https://iep.utm.edu/surv-eth/>.

¹²⁷ *Katz v. United States*, 389 US 347, 389 US 347 (U.S. Supreme Court 1967).

¹²⁸ Salter, *Politics at the Airport*, 106.

¹²⁹ *Hague et al. v. Committee for Industrial Organization*, 307 U.S. 496, 59S. Ct 954 (United States Supreme Court 1939).

Society for Krishna Consciousness, Inc. v. Lee, the court’s opinion held that airport terminals were not considered public forums in relation to First Amendment rights.¹³⁰

Another issue with free speech at the airport involves the all-to-common jokes about bombs during security screening.¹³¹ As Leese and Koenigseder state, when the 1960s opened up affordable air travel to the masses, revenue increased, but so did the risks of bombings and hijackings, which thus turned the airport into a “no bullshit” zone when it comes to humor and joking about terrorism.¹³² For example, in 2018, Los Angeles Airport Police arrested Trevor Davis, a Green Bay Packer’s wide receiver, at Los Angeles International Airport (LAX) for a false bomb threat after saying “yes” when asked by security screeners if he had packed explosives in his bag.¹³³ This example may sound similar to the Oliver Wendell Holmes’s opinion in *Schneck v. United States* regarding shouting fire in a crowded theater. However, in that case, shouting “fire” in a crowded theater is still protected under the first amendment unless there is no fire and the person has a willful intent to cause harm.¹³⁴ A passenger could not admit under any circumstances to having a bomb during screening at an airport and it not be considered illegal or threatening.

Court opinions and case law have guided law enforcement officials in how they model their agencies’ policy and policing efforts. Balancing public safety with the needs of the people has created a paradigm shift in modern policing that is moving away from

¹³⁰ Jodi L. Howick and Durham Jones, “Regulations Affecting the Exercise of First Amendment Activities at Airports,” *Airport Cooperative Research Program, Legal Research Digest* 26 (August 2015): 3, <https://spin-salad.com/wp-content/uploads/2015/08/First-Amendment-Activities-at-Airports.pdf>.

¹³¹ Oliver Burkeman, “Here’s Some Dynamite Advice: Don’t Make Bomb Jokes in Airports,” *The Guardian*, sec. Opinion, November 27, 2012, <https://www.theguardian.com/commentisfree/oliver-burkemans-blog/2012/nov/27/dynamite-advice-bomb-jokes-airports>.

¹³² Matthias Leese and Anja Koenigseder, “Humor at the Airport? Visualization, Exposure, and Laughter in the ‘War on Terror,’” *International Political Sociology* 9, no. 1 (March 1, 2015): 37–52, <https://doi.org/10.1111/ips.12075>.

¹³³ Elliott Hester, “What You Say on an Airplane Can Get You in Deep Trouble—and So Can What You Don’t Say,” *Los Angeles Times*, sec. Travel, May 14, 2018, <https://www.latimes.com/travel/la-tr-fly-guy-20180514-story.html>.

¹³⁴ Carlton F. W. Larson, “‘Shouting ‘Fire’ in a Theater’: The Life and Times of Constitutional Law’s Most Enduring Analogy,” *William and Mary Bill of Rights Journal* 24, no. 1, art. 6 (October 2015): 183.

reactive approaches to a more proactive, collaborative effort.¹³⁵ The majority of agencies in the United States are currently using some form of COP to engage the public and enhance the police-public relationships within their communities. Community policing was even touted by the President's Task Force on 21st Century Policing as a "guiding philosophy for all stakeholders," which made it one of their six pillars for building better policing for the new century.¹³⁶

According to Wells and Falcone, the paradigm of COP assumes three fundamental premises. The first is the assumption of a structural premise where police agencies are shaped by their organizational structures. The second is that a contextual premise exists that agencies, being "open systems," are constrained and influenced by their environments. Finally, the assumption of a universality premise, that the task of policing is the same everywhere and therefore a universal model can be applied to any agency.¹³⁷ As addressed throughout this thesis, the task of airport policing, while shaped and influenced by its organizational structure and environment, is not universally the same as all other policing efforts. The assumption that COP can be taken in cookie-cutter form and applied to any agency, especially that of an airport agency, is ill-conceived.

However, a philosophy within community policing exists that is rarely articulated in agency's efforts but may very well be applied to aerotropolis policing. Due to the unique environment of the aerotropolis and a lack of a truly established community, a different approach to community policing is needed. According to Russel et al., "community policing is not a single program or group of programs. Rather, it is a policing philosophy of service to the community."¹³⁸ The concept of police programs working with and engaging the community does not work well in an airport setting. Airport patrons, visitors, and even employees do not think of the airport as their community. Typically, that idea is

¹³⁵ Wells and Falcone, *Policing in the United States*, 1.

¹³⁶ President's Task Force on 21st Century Policing, *Final Report of the President's Task Force on 21st Century Policing* (Washington, DC: Office of Community Oriented Policing Services, 2015), 3.

¹³⁷ Wells and Falcone, *Policing in the United States*, 25.

¹³⁸ Glenn Russel et al., *Training the 21st Century Police Officer: Redefining Police Professionalism for the Los Angeles Police Department* (Santa Monica, CA: RAND, 2003), 97.

reserved for the cities or neighborhoods where they live. However, if the traditional COP concept is reversed and engage the airport police officers are engaged to consider the airport as their community and it is their responsibility to protect and safeguard it, the concept of community policing still exists. The idea of instilling a sense of pride, ownership, and service to the community within the police agency instead of the transient population makes more sense in an aerotropolis setting.

F. TRAINING AND EDUCATION

As the role of law enforcement continues to develop and become more complex and diverse, the need for effective police training is paramount. According to the President's Taskforce on 21st Century Police, training and education are a pillar of modern police reform.¹³⁹ The Task Force's report indicated that police training for the 21st century needs to reflect the changing environment by teaching better communication, respect, and tolerance. This training is key in an airport setting where officers must interact with millions of passengers, many of whom are international or from cultures different from what officers may be used to. The Task Force also noted that today's police training must emphasize the links between basic criminal activity and terrorism. As stated earlier, the risk of terrorism is heightened at international airports, and officers must be able to identify patterns or anomalies that may equate to a pre-incident indicator or preparatory conduct for a potential terrorist act.¹⁴⁰

Although training may be a fundamental element to policing, the training police officers get rarely relates specifically to the airport environment.¹⁴¹ According to Raffel, "criminal activity in airports includes crimes that most officers would not encounter outside of an airport."¹⁴² Therefore, it would make sense to have training available to airport police officers regarding these unique crimes. Federal law mandates that airport law enforcement

¹³⁹ Russel et al., 97.

¹⁴⁰ Brent L. Smith, Kelly R. Damphousse, and Paxton Roberts, *Pre-Incident Indicators of Terrorist Incidents: The Identification of Behavioral, Geographic, and Temporal Patterns of Preparatory Conduct* (Fayetteville, AR: Fullbright College, Terrorism Research Center, 2006), 3.

¹⁴¹ Raffel, "Airport Policing," 26.

¹⁴² Raffel, 27.

agencies train officers in the use of firearms, courteous treatment of passengers during law enforcement activities, and the understanding of law enforcement responsibilities under the airport security program.¹⁴³ These mandates are vague and non-specific. Airport police officers get basic police training and other service instruction consistent with urban or rural law enforcement, but not specific training appropriate for the tasks and legal areas required in the policing of a major international airport.¹⁴⁴

An aerotropolis policing model would necessitate training and education specifically designed to equip officers with the knowledge and abilities to police this unique environment. Basic skills and academy training are important to establish a baseline of knowledge and applicability in the basic functions of law enforcement. However, to provide public service to major airports effectively, additional training should be required in areas, such as insider threat mitigation, unattended bags, and potential explosive detection, ticket fraud, and other threats or crimes specific to the airport environment that may have a substantial impact on airport operations.

G. RESILIENCY

As stated in the previous chapter, delays and disruptions to airport operations can be costly on a global scale. Therefore, law enforcement agencies responsible for the safety and protection of the airport are also responsible for having the capacity to recover quickly from any event that causes delay and impacts the operations of the airport. According to Dial, having the ability to detect and mitigate disruptions before they occur is a significant aspect of organizational resiliency.¹⁴⁵ Airport police have a responsibility to ensure the safety of the traveling public and the airport environment. Having the ability to respond quickly to an event, isolate and contain the situation, execute a plan of action, and then immediately recover from the situation without causing undue panic or alarm is a vital skill in policing an airport.

¹⁴³ Department of Transportation, “Transportation,” 1542.217.

¹⁴⁴ Raffel, “Airport Policing,” 26.

¹⁴⁵ David E. Dial, “Enterprise Policing for the September 12th Era” (master’s thesis, Naval Postgraduate School, 2006), 56, <http://hdl.handle.net/10945/2915>.

The 2013 LAX shooting and the 2017 Fort Lauderdale Airport shooting are prime examples of how important resiliency and recovery is in the airport setting. In the LAX incident, a lone gunman carrying a rifle, entered Terminal 3, and began firing rounds as he walked through the concourse wounding three and killing TSA Agent Gerardo Hernandez.¹⁴⁶ The attack showed significant weaknesses and vulnerabilities in police response and recovery efforts. These efforts lasted nearly 30 hours, which affected over 1,500 flights and 171,000 passengers due to delays and investigations.¹⁴⁷ During the Fort Lauderdale shooting, a single gunman retrieved a handgun from his checked baggage and killed five passengers before surrendering to police.¹⁴⁸ The time from the first shot until the shooter was in custody was 90 seconds.¹⁴⁹ Even though the event was resolved quickly, recovery efforts caused over 40 delays, some lasting nearly eight hours.¹⁵⁰

Investigations into major incidents take time, effort, and resources to investigate and document the situation properly. The need to re-open an airport and resume operations should not come at the cost of poor police work. However, in an environment where time means money, sometimes millions of dollars, it pays to have a police force that can resolve situations effectively and efficiently to reduce waste, manage resources, and recover operations in a timely manner.

H. CONCLUSION

Just like the aerotropolis environment, aerotropolis policing is complex and multifaceted. The focus on securing and protecting the airport critical infrastructure

¹⁴⁶ Dan Weikel and Laura J. Nelson, "Shootings at LAX: LAX Shooting Points up Gaps in Post-9/11 Security," *Los Angeles Times*, November 3, 2013, ProQuest.

¹⁴⁷ Subcommittee on Transportation Security, *Lessons from the LAX Shooting: Preparing for and Responding to Emergencies at Airports* (Washington, DC: Subcommittee on Transportation Security, 2014), 2.

¹⁴⁸ Mark Berman and William Wan, "Five People Killed in Shooting at Fort Lauderdale Airport, Suspect in Custody," *Washington Post*, January 6, 2017.

¹⁴⁹ Stephen Hobbs and Megan O'Matz, "Chaotic Shooting Response Prompts Change at Fort Lauderdale Airport," *Sun Sentinel*, sec. Local News, Broward County News, January 5, 2018, <https://www.sun-sentinel.com/local/broward/fl-reg-fll-airport-shooting-year-later-20180104-story.html>.

¹⁵⁰ Bart Jansen, "Long Flight Delays Followed Fort Lauderdale Airport Shooting," *USA Today*, March 14, 2017, ProQuest.

complicates the traditional policing approaches used in the surrounding business complex. This focus makes integrating a current policing model into this complex environment difficult. With the complexities and regulations of the critical infrastructure, the dichotomy of the aerotropolis environment, the transient populations, and the variations of governmental ownership, trying to utilize any one current policing model may work well in one area, but poorly in another.

Aerotropolis policing must take into consideration the importance and high-value target prominence of the spatial form of the airport proper, while still providing effective protection of the functional form and linkages of the surrounding complex. This separation of forms can complicate policing efforts. Agencies must find balance in their approach and have an understanding that each area within the aerotropolis is a network of systems that rely on each other and no one area on the airport is more important than the other is.

Agencies must also ensure specific training is provided to airport police regarding the unique nature of airport crimes and conditions. Various court opinions and federal regulations have granted allowances in putting the overall safety of the public over personal protections and certain rights. These exceptions are often contradictory of the approaches taught for policing other metropolitan or rural areas for which these allowances are not afforded. Unique crimes and conditions require training beyond what is required in federal regulations and what is taught in basic police academies.

The specificity of airport police training should not only focus on airport crimes but should also impart a strong sense community and resiliency. The COP model, widely used in other agencies, may not work well in the airport setting due to the lack of a static community. However, the concept of community ownership within the police agency along with the ability to recover quickly from incidents are both highly beneficial to the engagement of the officers and vital to the protection and safeguarding of the aerotropolis and airport operations.

Each airport is different and each agency's approach to policing may differ slightly from the next, which may have to do with the makeup of the environment and geographical constraints or the way the airport is owned and operated. However, having an

understanding about what aerotropolis policing is and how it differs from other traditional law enforcement approaches makes policing the aerotropolis more effective. In the next chapter, the three primary types of airport policing (state police, local police, and airport police) are compared and analyzed to identify what approaches they incorporate into their law enforcement functions and what lessons can be learned from their methods and practices.

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V. COMPARISON STUDY

Each major airport differs in how it is designed, owned, and operated. Therefore, it can be concluded that different forms of policing are used at each airport as well. The three primary forms of law enforcement commonly seen in major airports are state police, local city, or county police, or law enforcement provided by an airport-governed police agency.¹⁵¹ This chapter comprises a comparative study that seeks to analyze each of these three common forms of airport policing to identify the challenges they face and the opportunities presented by each one. One major airport was selected from each predominant type of airport policing. The airports chosen for this study were based on size and governance, each one fitting the definition of an aerotropolis (introduced in the first chapter and explored in detail in subsequent chapters) and policed in a different way, either by state, local, or self-governed agencies. Academic research related to policing at each of these major airports was limited. Therefore, insight into these agency's approaches and methods was gained through some published primary and secondary research material, but mostly through interviews with senior law enforcement officials selected to represent each airport.

A. STATE POLICE: BOSTON LOGAN INTERNATIONAL AIRPORT

Named after Lt. General Edward Lawrence Logan, BOS became a commercial air travel destination in 1928 when the U.S. Army transferred ownership of the airport to the Massachusetts state legislature.¹⁵² Shortly thereafter, the legislature created the Massachusetts Port Authority (Massport) to control the airport, as well as the state's other port facilities.¹⁵³ As of 2019, Boston Logan was the 16th busiest airport in the United States in terms of passenger loads and the primary airport for the New England region.¹⁵⁴

¹⁵¹ Monteiro, *Models for Law Enforcement at Airports*, 1.

¹⁵² "Lt. General Edward Lawrence Logan International Airport: A History," Massachusetts Institute of Technology, accessed December 19, 2020, http://web.mit.edu/rama/www/logan_history.htm.

¹⁵³ Massachusetts Institute of Technology.

¹⁵⁴ "Busiest U.S. Airports—Number of Passengers 2019," Statista, accessed December 19, 2020, <https://www.statista.com/statistics/185679/passengers-boarded-at-the-leading-25-us-airports/>.

Its 1,700 acres of airfield and property make BOS a smaller airport when compared to the others in this study; however, its centralized location within metropolitan Boston makes BOS a highly valuable footprint with a major impact in the region it serves.¹⁵⁵

The Massport mission statement is “a world-class organization of people moving people and goods—and connecting Massachusetts and New England to the world—safely and securely and with a commitment to our neighboring communities.”¹⁵⁶ As it suggests in the mission statement, one focus of the organization is providing safe and secure means of transportation for the region. Massport understands that holding safety and security as a precedence requires having a world-class law enforcement agency actively patrolling their properties.

Boston Logan is somewhat unique in its form of policing. BOS is one of the few airports in the nation to use assets from a state police organization to provide public safety services within the airport property. New York State Police, in conjunction with the Port Authority Police Department, occasionally patrol some airports, including New York’s John F. Kennedy International, and LaGuardia airports, but Boston Logan is one of only a few airports in the United States that relies on state police for everyday law enforcement responsibilities.¹⁵⁷ Troop F of the Massachusetts State Police is responsible for the safety and security of all Massport properties, which includes Boston Logan, Flynn Cruiseport, Conley Terminal, Worcester Regional Airport, and Hanscom Field.¹⁵⁸ While a port authority operates the airport, the police officers responsible for the airport are employed by the State of Massachusetts.

On, December 10, 2020, the author spoke with Kevin Emmett, Troop F Massachusetts State Police. According to Emmett, Troop F is made up of nearly 200 sworn troopers, who are responsible for providing law enforcement to the Massport properties.

¹⁵⁵ “About Boston Logan International Airport,” Massport, 2020, <http://www.massport.com/logan-airport/about-logan/>.

¹⁵⁶ Massport, *Reflecting Forward: Massachusetts Port Authority Annual Report* (Boston, MA: Massport, 2019), 2, https://www.massport.com/media/4052/massport_annual_report_2019.pdf.

¹⁵⁷ Monteiro, *Models for Law Enforcement at Airports*, 41.

¹⁵⁸ “Massachusetts Port Authority,” Massport, accessed December 19, 2020, <https://www.massport.com/>.

The unit's specialties include a dedicated detective unit, bomb squad, community services unit, marine unit, and federally certified K-9 teams on site at the airport.¹⁵⁹ Emmett stated that Troop F is seen as a priority assignment in the Massachusetts State Police and a difficult spot to get due to its unique nature and opportunities in specialty roles. While most airports in the country are seeing passenger levels increase around 3% per year, Boston Logan's growth rate is closer to 5%, which means Troop F is facing the challenge of protecting a passenger population that is on pace to increase by over one million passengers per year.¹⁶⁰ Emmett felt that much of this growth could be attributed to Boston Logan's international route expansion and a focus on bringing in more Airbus A380 flights. He also thinks that to keep pace with this growth and expansion, Troop F has increased its manpower by approximately 32% in the past 10 years.

According to Emmett, Troop F has experienced several challenges in maintaining an effective policing presence at BOS. With the growth and expansion of the airport's passenger numbers, the department has had to adapt quickly to higher call volume and higher crime rates. The more passengers at the airport at any given time creates a higher-value target and threat of attack requiring Troop F to find new methods of responding and preventing these threats, including enhanced foot patrols with long rifles. Emmett stated that these rifle patrols are necessary to exhibit a heightened sense of security and officer presence to the traveling public. Also, due to the ever-changing and busy nature of the airport and its population, the officers often find themselves becoming very reactive to calls for service instead of proactive in their policing methods.

The policing models used by Troop F rely heavily on enhanced security and high visibility deterrence. Community policing efforts, through their community services unit, provide a conduit between the airport police and the employees and stakeholders of the airport. According to Emmett, the employees and staff make up the true community of Boston Logan by providing a key partnership in ensuring the airport is safe and protected.

¹⁵⁹ "Massachusetts State Police Troop F," Massport, accessed January 9, 2021, <http://www.massport.com/massport/about-massport/public-safety/ma-state-police/>.

¹⁶⁰ Christopher Muther, "Logan Poised to Become One of the 10 Busiest Airports in the Country," *Boston Globe*, September 4, 2019, <https://www.bostonglobe.com/lifestyle/travel/2019/09/04/logan-poised-become-one-busiest-airports-country/0k2zL5MOiueDSQAfahnS2J/story.html>.

He also mentioned that the employees are an extra set of eyes and ears and have always been very receptive to security training and the airport's See Something, Say Something program. Massport also provides a specialized training video regarding active shooter preparedness on its website with a focus on preparing its employees and patrons on how to respond to these threats and potentially save lives.¹⁶¹ This partnership equates to a force multiplier that ensures people are still security-minded and actively watching out for suspicious activity and security concerns, even when the police are not present.

As far as balancing the responsibilities of securing the terminal areas with the needs of the surrounding businesses, Emmett said that Troop F's policing concept is that all areas are important and need to be protected. The terminals however may be focused on more solely because of the increased threat levels and the need to resolve problems quickly to maintain continuity of operations. According to Emmett, Troop F is a small army, but they have to portray otherwise with an overwhelming response when addressing threats and deterring crime. Therefore, the primary focus for the department is on areas where the threat is highest and the potential cost of failure is greater. That area is the terminal.

Due to the manpower allocated to Troop F, officers rely heavily on community support with their airport employees and stakeholders to provide force multiplication in addressing safety and security for the airport. Troop F is only a fraction of the entire agency; however, they can pull from the resources of the rest of the Massachusetts State Police, as well as the Boston Police Department force during major events or incidents. BOS is unique in this case due to its confined fit into the surroundings of Boston's metropolitan city center and the ease of access for other agencies to assist if needed. Other aerotropoli are much more secluded and isolated in their locations, which requires more independent police governance.

B. CITY POLICE: DENVER INTERNATIONAL AIRPORT

Officially opened to the public in 1995, DEN is the newest aerotropolis in the United States. It is currently the fifth busiest airport in the nation and serves nearly 70

¹⁶¹ "Active Shooter Preparedness," Massport, accessed January 10, 2021, <http://www.massport.com/massport/about-massport/public-safety/active-shooter-preparedness/>.

million passengers in 2019.¹⁶² As the nation's largest airport, DEN has an overall property incorporating 135 square kilometers of airfield, terminal space, and supporting businesses.¹⁶³ To put this number into perspective, it is nearly 10 times the land size of Los Angeles' LAX. Situated approximately 25 miles east of downtown Denver, it is often joked that the airport "may as well be in Kansas."¹⁶⁴ However, being so far from the city center has some benefits. As the airport continues to grow into a destination in its own right, away from the congestion of central Denver, it is attracting new businesses, entertainment, and surrounding housing editions, just as Kasarda predicted.¹⁶⁵

An airport of this size requires a specialized and dedicated police force to protect it. The Denver Police Department holds that responsibility with its Airport Police Bureau.¹⁶⁶ On December 10, 2020, the author spoke with Jess Leuthauser of the Denver Police Department Airport Bureau. He believes that with just over 100 sworn officers, the bureau is tasked with uniformed patrol, safety, and security of the roadways, traffic investigations, and enforcement and criminal investigations that occur on DEN property. He feels that being situated far from downtown Denver gives the airport more of an "outpost" feel and must be somewhat autonomous, and thus benefits from having its own emergency communications and dispatch center, as well as its own holding facility. He thinks that this autonomy allows the Airport Bureau to be more efficient, especially in a unique job function that differs from traditional city patrol.

The Airport Bureau has experienced major growth within its jurisdiction in the last 10 years. In 2019, DEN served approximately 70 million passengers, following six straight years of growth and a 7% increase over 2018's numbers.¹⁶⁷ According to Leuthauser, the

¹⁶² Statista, "Busiest U.S. Airports."

¹⁶³ Magdalena Dugdale, "The Ten Largest Airports in America," *Airport Technology*, January 23, 2020, <https://www.airport-technology.com/features/largest-airports-america/>.

¹⁶⁴ Joe Rubino, "Denver International Airport at 25: From Boondoggle to Boon," *Denver Post*, March 1, 2020, <https://www.denverpost.com/2020/03/01/denver-airport-25-years-boondoggle-anniversary/>.

¹⁶⁵ Kasarda and Lindsey, *Aerotropolis*, 6.

¹⁶⁶ "Denver Police Department: Police Directory," Denver: The Mile High City, accessed December 23, 2020, <https://www.denvergov.org/Government/Departments/Police-Department/Police-Directory>.

¹⁶⁷ Sam Tabachnik, "Denver Airport Sets Passenger Record in 2019," *Denver Post*, February 13, 2020, <https://www.denverpost.com/2020/02/13/denver-airport-passenger-numbers/>.

addition of a light rail system connecting downtown Denver to the airport has led to a steady increase in the homeless population, as well as an influx of property crime. The airport has also built hotels and other businesses in and around the airport in an attempt to bring more visitors to the area. As the airport develops into a true aerotropolis, and city creep continues to bring more crime, Leuthauser feels the airport bureau has met these challenges by adding additional manpower and K9 teams using a variation of policing models including COP and crime prevention methods.

The Airport Bureau relies on a heavy officer presence and deterrence to keep crime numbers and response times down. According to Leuthauser, the Bureau also engages the airport employees and stakeholders in community efforts to provide added security. In addition, he says that the airport holds weekly safety meetings at which the police provide employees with information regarding on-going crime trends and safety information to keep the stakeholders and employees informed and engaged in the overall security of the airport. Communication between law enforcement and key stakeholders during critical events at DEN has been an issue at the airport in the past due to slow and often unreliable systems.¹⁶⁸ However, the airport has emphasized quick communication, upgrading communication channels, and technology in an effort to enhance event-resolution and to reduce notification and recovery times during major delays.¹⁶⁹

Leuthauser states that in terms of balancing the security requirements of the terminals with the needs of the surrounding businesses, the airport bureau puts a priority on terminal security to provide a safe environment for the traveling public, with a secondary focus on surrounding infrastructure and roadways. In other words, more manpower and resources are allocated to the areas of the airport that have the greatest impact.

Like Troop F in Boston, the Denver Airport Bureau also engages the employees and stakeholders as an added security measure in detecting and deterring crime, but being

¹⁶⁸ Josh Cable, "Event-Resolution System Keeps Denver Intl. Airport Flying," *Government Product News* 46, no. 11 (November 2007): 5.

¹⁶⁹ Cable, 5.

a part of the Denver Police Department, the Airport Bureau can also utilize the resources and experience of the rest of the department when addressing major crimes or incidents. Policing such a large airport environment isolated from any other metropolitan areas creates its own challenges and opportunities. However, being a division of a larger police agency has benefits when addressing resource management and agency needs. Other law enforcement agencies are responsible for policing large airports that are not a division of a larger agency and must be more self-sufficient and more independent.¹⁷⁰

C. AIRPORT POLICE: DALLAS FORT WORTH INTERNATIONAL AIRPORT

As the first official international hub, DFW changed the landscape of air travel when it opened in 1974.¹⁷¹ After decades of conflict between the cities of Dallas and Fort Worth over who would have ownership over the North Texas region's primary commercial airport, the Civil Aeronautics Administration, now the Federal Aviation Administration, made the decision to force both cities into agreeing to a joint-ownership airport between the two cities.¹⁷² DFW's creation caused issues of how to govern an airport that straddles two counties and sits within the boundaries of four different cities. Dallas and Fort Worth voters solved the issue by making DFW a political subdivision governed by a joint airport board.¹⁷³ Little did they know at the time it would create a financial boon for both cities.¹⁷⁴ Today, DFW is now a "global megahub" that has secured the spot as the nation's second largest airport after DEN and boasts its own zip code and city designation.¹⁷⁵ Serving over

¹⁷⁰ These airports include Dallas Fort Worth International Airport, Los Angeles International Airport, St. Louis Lambert International Airport, Washington's Dulles International Airport, and Reagan National Airport.

¹⁷¹ Kasarda and Lindsey, *Aerotropolis*, 95.

¹⁷² Stanley H. Scott and Levi H. Davis, *A Giant in Texas*, 1st ed. (Quanah, TX: Nortex Press, 1974), 57.

¹⁷³ Scott and Davis, 56.

¹⁷⁴ For an in-depth look at how this rivalry played out over the decades-long fight between Dallas and Fort Worth mayors and city councils over the planning, design and building of DFW International Airport, it is covered by Dr. Stanley H. Scott and Levi H. Davis in their book, *A Giant in Texas*, written the year the airport opened.

¹⁷⁵ "Dallas Fort Worth International Airport," Texan by Nature, 2020, <https://txn20.org/honorees/dallas-fort-worth-international-airport/>.

75 million passengers per year, DFW is now the fourth busiest airport in the United States based on 2019 numbers.¹⁷⁶

The mission statement of DFW is “we provide an exceptional Airport experience for our customers and connect our community to the world.”¹⁷⁷ While the mission of the airport is more customer-driven, the airport’s key results put safety and security at the foundation of the airport enterprise.¹⁷⁸ DFW has set strategic objectives to strengthen an airport-wide culture of proactivity and organizational resiliency regarding the safety of the airport.¹⁷⁹ The responsibility of policing DFW falls on the police officers of the airport’s self-governed Department of Public Safety. The Texas Legislature added a provision into the Texas Transportation Code articulating that only police officers authorized by the joint board of the airport are permitted to regulate, protect, or police the airport property.¹⁸⁰ In other words, DFW Airport Police have sole jurisdiction on airport grounds even though the airport rests within the jurisdiction of four cities and two different counties.

As DFW continues to grow, the police department has had to grow with it. On December 2, 2020, the author spoke with Jon Taylor of DFW, who feels that with over 220 sworn officers, the department’s manpower has increased by over 20% in the past 10 years to meet the needs of the airport. This increase in manpower has helped accommodate the needs involved in protecting the rapid expansion that has occurred across the airport property in the last several years. On December 8, 2020, the author spoke with Jason Byers of DFW, who stated that this expansion has included a yearly increase in passenger volume, the addition of several mixed-use business and industrial complexes, terminal expansions, and a new hotel. The addition of two new rapid transit systems now links the airport directly

¹⁷⁶ Statista, “Busiest U.S. Airports.”

¹⁷⁷ Sam Coats, Mike Rawlings, and Regina T. Montoya, *DFW International Airport Strategic Plan 2016–2020* (Dallas: DFW International Airport, 2015), 4.

¹⁷⁸ Coats, Rawlings, and Montoya, 4.

¹⁷⁹ Coats, Rawlings, and Montoya, 26.

¹⁸⁰ “Texas Transportation Code Article 3, Aviation,” Sec. 22.074 (e) Joint Board Subchapter D. Joint Operations § (1995), Texas Constitution and Statutes, <https://statutes.capitol.texas.gov/Docs/TN/htm/TN.22.htm>.

to the downtown areas of both Dallas and Fort Worth.¹⁸¹ Byers believes that this growth has caused a noticeable increase in both property crimes and crimes against persons within the airport jurisdiction due to the ease of access and the ability to arrive and depart the airport property quickly.

Taylor feels that DFW Airport Police officers rely heavily on several policing models including COP, as well as relying on strategic partnerships. Byers thinks that some problem-oriented strategies are used outside of the central terminal area because of a consistency in the nature of most of the surrounding support businesses, which makes it easier to identify patterns and problem areas. He also says that community programs are limited to airport employees rather than the passenger populations due to the unique airport environment and transient nature of the traveling public. A major challenge for airport police at DFW Taylor states is trying to remain invisible yet approachable at the same time; it is necessary to be highly visible while not causing overt stress on the already stressful practice of air travel. According to him, the primary focus of DFW Airport Police should be determining the “WIN” or “What’s Important Now” and staying focused on that. Airport policing offers more opportunities for officers to have discretionary time to choose their own activity. Byers believes that what they do with that time makes a big difference in how safe and secure the airport environment is.

According to Byers, when balancing the security needs of the terminals with the needs of the surrounding businesses, the terminals remain a higher priority. He also feels that this balancing act is primarily due to the TSA mandate of maintaining an adequate presence within the terminals, a higher risk of a mass-casualty event, and a higher impact on public trust when using high-visibility deterrence. Roadways and traffic enforcement are a secondary focus for DFW and the major highway that bisects the airport is a very busy and central artery within the Dallas/Fort Worth Metroplex. According to Byers, this roadway becomes critical if people cannot pass through or make it to their planes on time.

¹⁸¹ Dallas Area Rapid Transit, *DFW Area Rail System Map* (Dallas: Dallas Area Rapid Transit, 2019), <https://www.dart.org/maps/pdfmaps/DARTRailSystemMap12aug19.pdf>.

As DFW land use continues to be developed, the focus on the central terminal versus the outlying businesses may become more balanced. DFW has 6,600 acres of developable land with over 5,200 gross acres emerging as multiple commercial business centers, which greatly expands the diversity of businesses, infrastructure, and police calls for service across the airport property.¹⁸² According to Taylor, to be effective in policing such a large and diverse airport like DFW, police officers must be proactive, rely on good leadership, and not fall into a reactive routine.

Unlike Troop F in Boston, and the Airport Bureau of the Denver Police Department, DFW Airport Police are not a division of a larger police agency that comes with available resources and experience. In other words, DFW Airport Department of Public Safety must have the resources and manpower needed at any given time to address any major incident effectively. If a homicide were to occur at Boston Logan or Denver International, the respective police agency for that airport could request inside agency personnel who very likely have experience investigating these types of cases. Homicides are extremely rare at DFW; therefore, if one were to occur, the chances of having officers with previous experience in this area is unlikely and the agency would most likely request assistance from an outside agency. However, being a self-sustained airport police agency does mean less interference in methods and approaches from non-airport police directives.

D. CONCLUSION

Prior to conducting interviews for this comparative study, it was hypothesized that the research would reveal one governance method of airport policing was more effective or efficient than the others in reference to providing adequate safety and security to their respective aerotropolis. After having spoken with several officers in key leadership and administrative positions within their airport police agencies, the methods, approaches, and practices of each agency appear to be very similar in structure and all agencies face very similar challenges and opportunities within their respective jurisdictions.

¹⁸² Dallas City Council, *Dallas City Council Briefing*, 4.

Crime rates and arrests have been steadily rising at each airport in this study for several causes, but mainly because of a steady increase in the airport populations. Passenger numbers are on the rise, which provides a larger number of potential targets and available property. All three airports have a rapid transit system linking the airport with a downtown area. Two of the three airports interviewed expressed that these rapid transit systems are a conduit for homeless populations to enter the airport that creates a social issue and increases property crimes.

Each person interviewed had the same response concerning COP efforts; the stakeholders and airport employees were considered the true community for the airport and not the passenger population. This viewpoint is primarily due to the employees being a more stable, unchanging group that offers a better return on investment for community-based efforts and programs. While some agencies did more outreach and training with airport employees, all agencies considered the employees and stakeholders to be a force multiplier for added security within the airport and support for the officers. Being an airport police agency that is a smaller part of a larger agency has benefits in resource management and experience; however, being a self-sustained police force provides added benefit to the self-directed policing approaches.

Proactivity over reactivity was also a constant theme for each airport police agency. Byers feels that due to the nature of airport operations and the transient populations within, officers tend to find themselves falling into a reactive routine of taking reports on crimes that have already occurred instead of taking proactive steps to prevent crimes from occurring. As shown in Figure 4, all departments interviewed stated that a shift to proactivity, crime reduction techniques, and an officer mentality of deterrence and detection would have a better effect on the overall daily operations of the airport to make policing the airport much easier and the environment much safer.

	Challenges	Models	Community	Primary Focus
State Police (BOS)	- Population Increase - Crime Rate Increase	- COP - Enhanced Security - Deterrence	- Airport Employees - Stakeholders	Terminal Area
Local Police (DEN)	- Population Increase - City Creep - Crime Spill-over	- COP - Crime Prevention	- Airport Employees - Stakeholders	Terminal Area
Airport Police (DFW)	- Population Increase - Crime Rate Increase - Rapid Expansion	- COP - Strategic Partnerships - POP	- Airport Employees - Stakeholders	- Terminal Area - Major Roadways

Figure 4. Similarities and Differences in Airport Policing Methods by Agency Type.

VI. FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

A. AEROTROPOLI AS CRITICAL INFRASTRUCTURE

This thesis has explored the growing concept of the aerotropoli's role in the global transportation network, and how these critical connectors are policed. Although legally and administratively separated from nearby communities, these "detached universes" contribute not only to transportation, but also form a substantial and tangible internet of people and goods.¹⁸³ These major airports keep world economies running through commerce, trade, networking, and tourism, while supporting millions of jobs in the process.¹⁸⁴ As a byproduct of this impact, the aerotropolis will continue to attract more people and businesses and grow bigger with increased passenger numbers and additional commercial development year-over-year.¹⁸⁵ While most people think only of the main terminal area as "the airport," aerotropoli are much more than that. They are a complex environment with functional and spatial forms combined with connective linkages that reach far beyond the terminal. These airports are transforming into self-supporting destinations with their own resources and infrastructure, just as Kasarda predicted in 2011. They are cities of hundreds of thousands of strangers either in the midst of, or in support of, the process of flight.

While these airport-cities are booming, the target on their back is growing. It is no secret that the critical infrastructure of airports and the aviation industry are high-value targets threatened by crime and terrorism.¹⁸⁶ Due to their tangible and symbolic value,

¹⁸³ Kasarda and Lindsey, *Aerotropolis*, 9.

¹⁸⁴ Kasarda and Lindsey, *Aerotropolis*.

¹⁸⁵ When this thesis was started, the world did not know what the novel coronavirus-2019 or "COVID-19" was. During the research and writing, it became overly apparent that this virus would have a devastating impact on the aviation industry. While it has proven to have a detrimental global impact, this author chose to write this thesis with the expectation that a vaccine would be quickly developed and the world would eventually return to a pre-COVID state. Therefore, the passenger numbers and growth rates for airports provided in this thesis do not reflect the numbers for the year 2000 in hopes that these low numbers related to travel restrictions would only be temporary.

¹⁸⁶ Government Accountability Office, *Transportation Security Information Sharing*, 43.

these targets must be hardened to stay vital and operational. History has shown how this infrastructure can be used against others, either by exploiting the availability of large crowds in confined spaces for mass-casualty attacks or by using the aircraft itself as a weapon of terror. The potential for this industry to be used as an objective in terrorism plots cannot go unnoticed.

The impact an attack would have to airport operations is understood, but it does not even take an incident of the magnitude of a terrorism event to cause airports delays that cost the airlines substantial time and money. For example, in October 2019, an unattended bag located at a terminal gate at Jackson Hole Airport caused flight delays affecting nearly 300 passengers before the bag was cleared and flights were allowed to resume.¹⁸⁷ What may seem like minor issues can cause hundreds of thousands of dollars in lost revenue that have a ripple effect across the entire industry. For this reason, resiliency is paramount in the aerotropolis environment. Airports must have the ability to recover quickly from interrupting events and to do so effectively, an adequate police force dedicated to the airport to detect, deter, and defend against crime and terrorism and assist in maintaining continuity of operations must exist.

This thesis explored the approaches taken by police agencies with disparate organizational features to serve and protect airports, which are—from a policing standpoint—challenging because of the need to balance resources to reduce crime effectively and efficiently, as well as create a safe and secure environment across the entire airport property. This unique environment requires police officers to have specialized training and knowledge regarding the distinctive aspects of critical infrastructure and the various crimes that only occur at airport settings. While current policing models are effective in identifying and reducing crime in traditional metropolitan cities, they must be adapted to be effective at a major airport.

¹⁸⁷ “Unattended Bag Causes Flight Delays at Airport,” Buckrail, October 11, 2019, <https://buckrail.com/unattended-bag-causes-shutdown-flight-delays-at-airport/>.

B. AEROTROPOLIS POLICING

It has been established that the aerotropolis is a high-value target critical to the global economy and needs to be well protected. Thus, the federal government mandates that all commercial airports have a well-trained police force, adequate in size, and ready to respond to emergency events to prevent lengthy disruptions to the industry. This requirement is unique in the field of policing and shows how important the government feels about protecting air travel and airports. Although the mandate is in place, airport police officers still face the challenges of rising crime rates at airports and a lack of specialized training specific to policing the airport environment.¹⁸⁸ As these major airports continue to grow, these challenges will become more abundant, and airport police agencies will have to find ways to adapt and overcome these challenges.

Each airport is governed differently based on ownership, which has a direct effect on what kind of police agency operates on the airport. It might be concluded that having a different type of police agency dedicated to an airport would result in very different methods of policing that airport. In the previous chapter, all three major types of airport law enforcement agencies were compared and analyzed to see how they differed in challenges faced, methods and models of policing, and primary focus. It was determined that the type of policing agency had little effect on these variables. All agencies analyzed faced very similar challenges, policed their respective airport with similar methods and models, and all had a primary focus on what they felt was the most prominent target, the terminals.

Policing the terminal areas can be challenging. With a mall-like feel, the terminal areas of the airport are where the highest concentrations of people are found, with abundant opportunities for theft from passengers and retail shops, and numerous venues that serve a near-constant flow of alcohol.¹⁸⁹ While it may feel like a mall to the passenger populations, the added element of air travel creates a defensive security atmosphere for police that is exponentially more notable than in mall policing. The U.S. court system has even weighed

¹⁸⁸ Raffel, "Airport Policing," 26.

¹⁸⁹ Bednarek, *Airports, Cities, and the Jet Age*, 138.

in on the security challenges of policing the terminals. Federal courts have taken a utilitarian view of passenger's Fourth Amendment rights on the sterile side of the concourse, which finds that the security of the flying public as a whole supersedes the individual's right to privacy when it comes to security screening and searches.¹⁹⁰ The U.S. Supreme Court even ruled that airports are not considered true public forums and therefore a person's First Amendment rights to free speech while at the airport are limited in relation to solicitation and verbal threats real or in jest.¹⁹¹

This thesis has found that policing a major airport in the United States is unique with its own set of challenges and opportunities that set it apart from traditional metropolitan policing seen elsewhere. Current policing models, including COP and POP, are being used by airport police agencies. However, it has been found that these models are being modified to fit the unique environment of policing a highly transient population. Airport police officers find themselves reacting to crimes as they occur instead of taking proactive steps to prevent crime before it happens. Due to these challenges, this thesis recommends taking the methods being used by airport police agencies and combining them with lessons learned through this research to suggest a specific aerotropolis policing model.

C. A NEW MODEL OF POLICING

1. The Balancing Act

As the name suggests, the aerotropolis is made of two combined entities, the airport and the surrounding support facilities and businesses. Each airport law enforcement agency in this comparison analysis identified that its primary focus was on the terminal areas of the airport. This focus does make sense due to the nature of the terminal being the beating heart of the airport and the most high-value property in terms of economic impact and the threat of crime and terrorist attacks. However, as these aerotropolises expand outward with new business districts, warehouses, and other industries with an economic impact of their own and a need that requires policing and protection, this focus may need to shift more to

¹⁹⁰ *United States v. Davis*, 482 F. 2d 893.

¹⁹¹ *Hague et al. v. Committee for Industrial Organization*, 307 U.S. 496, 59S. Ct 954.

the center. This shift would require resource management by the airport police agency to ensure sufficient personnel and equipment to police both the airport and the surrounding properties effectively. An analysis of other campus-style policing like SRO programs may be effective in scoping the role of airport police officers and seeing the benefits of having dedicated officers to the airport proper.

2. Identifying the Community

The employees and stakeholders of an airport are the most stable and unchanging population at an airport. This population also has the most to gain or lose from a loss of clientele and patrons. If passengers stop coming to an airport because they believe it is unsafe, the airport employees and stakeholders will no longer have stable employment and the surrounding support structure will suffer. Therefore, engaging the employee populous to have a sense of ownership in the safety and security of the airport is something airport police departments should be doing. Whether it be through additional training, See Something–Say Something programs, or weekly safety meetings hosted by the police agency, these attempts are all added measures to keep the employees motivated to help the police keep their work environment safe and operational.

Based on the research and interviews, the transient nature of the passenger population is difficult to manage when providing community-policing efforts. They have very limited buy-in to the airport as a community and attempts to gain commitment in reporting suspicious circumstances typically do not have the desired effect unless the passenger is directly involved. One aspect of COP that airport police agencies should emphasize to their officers is the concept of “policing as a philosophy of service to the community.”¹⁹² While the passengers may not consider the airport as their own community, since it is not their area of residence, the police officers should consider the airport as their community with the responsibility to protect it and serve as its guardian. The law enforcement officers dedicated to policing these major airports should consider their airport in the same way they consider their home. They should provide a safe and

¹⁹² Russel et al., *Training the 21st Century Police Officer*, 97.

welcoming environment to those who visit; however, those who wish to disrupt that environment should be treated in the same manner as if they were causing the disturbance within the officer's own home. This concept still fits the ideals of COP, with the difference being it is now focused on policing the officer's community and not a community of residents.

3. Proactive Detection and Deterrence

As discussed, major airports are high-value, high-impact targets for criminal and terrorist elements that must be protected with proper security measures and policing. While crime rates nationwide have fallen in recent years, crime at airports continues to happen and often has a greater impact. Through research, it has been established that airport police departments often find themselves lacking specialized training, face constant infrastructure and population growth, and generally react to incidents that occur on the airport rather than employing proactive policing measures.

As with any population, while it may seem difficult to police a population of tens of millions of people with a few hundred officers, only a fraction of the population commit crimes.¹⁹³ Therefore, policing efforts should be focused on detecting and deterring this small percentage who wish to cause harm and in areas where the most harm can be caused. Speaking with different airport agencies, this area currently appears to be the central terminal areas with higher concentrations of people and property and easier access to critical infrastructure and aircraft. As Byers stated, airport agencies see less call volume than larger metropolitan cities allowing officers more available discretionary time to commit to self-initiated activity. It is recommended that this area be hardened through various means including active patrolling and high-visibility deterrence efforts, community outreach with employees and stakeholders, added technology, and other means of force multiplication. Airport specific training should be made available to all airport police

¹⁹³ Örjan Falk et al., "The 1% of the Population Accountable for 63 % of All Violent Crime Convictions," *Social Psychiatry and Psychiatric Epidemiology* 49, no. 4 (April 2014): 559–71, <http://dx.doi.org.libproxy.nps.edu/10.1007/s00127-013-0783-y>.

officers to help them understand the unique aspects of airport crime better and how to tackle methods of crime reduction and prevention effectively.

As these aerotropoli continue to grow and develop more business, retail, and mixed-use districts, the focus may have to shift to some degree. Many major airports are developing commercial warehouse districts, high-end shopping and entertainment venues and upscale hotels with the surrounding airport property. Many of the methods used in the terminal areas for target hardening may also be incorporated in these surrounding areas as well. Active patrolling, reassurance policing, and high-visibility activity should also help harden these targets and deter potential criminal actors from the area. It can already be proven that high-visibility deterrence works. In 2009, The FBI arrested Hosam Samadi for attempting to detonate a vehicle borne improvised explosive device (VBIED) near a building in downtown Dallas.¹⁹⁴ Samadi claimed he originally targeted DFW but chose a different location because he felt DFW's "security was too strong" when he observed officers while conducting surveillance.¹⁹⁵ Every officer that conducts a traffic stop, foot patrol, or even casual chat with a passenger, is an added visual deterrent that may prevent a crime or act of terror from happening at the airport.

D. CONCLUSION

As reflected in the literature review, more research is needed in the area of airport policing. Extensive research in airport security has been conducted; however, most of this research is widely attributed to the TSA or airport building design and regulations. While this thesis focused specifically on airport police agencies and the methods needed to provide safety and security from a law enforcement perspective, more academic research is needed in the field of airport policing. Additional research would also be helpful in the aviation industry regarding the relationships and cooperation between airport police and the number of other federal law enforcement and investigative agencies present at airports, as well as private and non-commissioned security personnel. Since airport policing is such

¹⁹⁴ Stacy Morrow and Elvira Sakmari, "FBI Arrests Man in Dallas Skyscraper Bomb Plot," *NBC 5 Dallas-Fort Worth* (blog), updated September 25, 2009, <https://www.nbcdfw.com/local/fbi-arrests-man-accused-in-skyscraper-bomb-plot/1858964/>.

¹⁹⁵ Morrow and Sakmari.

a vital field, more research in these areas would greatly benefit this specific practice of policing.

Air travel is still the quickest and most effective form of transportation and looks to remain that way for some time. As history has shown, centers of transportation attract innovation, development, trade, and a big economy. The aviation industry will continue to grow, and the growth of this nation's largest airports is directly related. Already seen is the emergence of the aerotropolis, with many of this country's largest and busiest airports looking and acting more like self-contained airport cities. The aerotropoli of today and tomorrow need public safety and security to maintain operations and continue providing the vast global economic impact for which they are currently responsible. Thus, an adequate, well-equipped, and well-guided police force dedicated to providing that safety and security is essential.¹⁹⁶

Current models of policing have been established and tested for many decades in metropolitan policing. These models meet different needs and are employed based on the environment that needs to be policed. However, these models were developed based on policing traditional static and well-established populations. Airport police officers face the challenge of providing public safety to a highly transient and fleeting population in an environment that does not react well to change or disruption. Policing models must be adapted to be effective in providing safety and security to these populations of strangers in such a unique environment.

An effective aerotropolis policing model should maintain a proactive approach to airport law enforcement methods with airport-specific training, high-visibility deterrence, and an emphasis on officer presence. However, the airport environment encompasses more than just being seen. Airport police must provide reassurance policing within the terminals and other high-value target areas to deter threats while also maintaining a more customer-oriented approach to not impact the business aspect of the airport negatively. According to Nieto, "The real challenge for aviation is to implement security measures that can respond

¹⁹⁶ Monteiro, *Models for Law Enforcement at Airports*, 2.

to threats and affect passengers as little as possible, and with positive perceptions.”¹⁹⁷ While difficult at times, airport police must find a fine balance between business and convenience with that of public safety and security.¹⁹⁸ As aerotropoli adapt and grow, aerotropolis policing must adapt and grow with them. The future of air travel depends on it.

¹⁹⁷ Nieto, “Emphasizing the Importance of a Safe and Secure Aviation Industry.”

¹⁹⁸ Mark, “Airport Security,” 17.

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APPENDIX. 49 CFR 1542—AIRPORT SECURITY

Subpart C—Operations

§ 1542.215—Law Enforcement Support.¹⁹⁹

(a) In accordance with § 1542.217, each airport operator required to have a security program under § 1542.103(a) or (b) must provide:

- (1) Law enforcement personnel in the number and manner adequate to support its security program.
- (2) Uniformed law enforcement personnel in the number and manner adequate to support each system for screening persons and accessible property required under part 1544 or 1546 of this chapter, except to the extent that TSA provides Federal law enforcement support for the system.

(b) Each airport required to have a security program under § 1542.103(c) must ensure that:

- (1) Law enforcement personnel are available and committed to respond to an incident in support of a civil aviation security program when requested by an aircraft operator or foreign air carrier that has a security program under part 1544 or 1546 of this chapter.
- (2) The procedures by which to request law enforcement support are provided to each aircraft operator or foreign air carrier that has a security program under part 1544 or 1546 of this chapter.

§ 1542.217—Law Enforcement Personnel.²⁰⁰

(a) Each airport operator must ensure that law enforcement personnel used to meet the requirements of § 1542.215, meet the following qualifications while on duty at the airport

- (1) Have arrest authority described in paragraph (b) of this section;
- (2) Are identifiable by appropriate indicia of authority;
- (3) Are armed with a firearm and authorized to use it; and

¹⁹⁹ Legal Information Institute, “49 CFR § 1542.215—Law Enforcement Support,” Cornell Law School, accessed February 20, 2021, <https://www.law.cornell.edu/cfr/text/49/1542.215>.

²⁰⁰ Legal Information Institute, “49 CFR § 1542.217—Law Enforcement Personnel,” Cornell Law School, accessed February 20, 2021, <https://www.law.cornell.edu/cfr/text/49/1542.217>.

(4) Have completed a training program that meets the requirements of paragraphs (c) and (d) of this section.

(b) Each airport operator must ensure that each individual used to meet the requirements of § 1542.215 have the authority to arrest, with or without a warrant, while on duty at the airport for the following violations of the criminal laws of the State and local jurisdictions in which the airport is located -

(1) A crime committed in the presence of the individual; and

(2) A felony, when the individual has reason to believe that the suspect has committed it.

(c) The training program required by paragraph (a)(4) of this section must -

(1) Meet the training standard for law enforcement officers prescribed by either the State or local jurisdiction in which the airport is located for law enforcement officers performing comparable functions.

(2) Specify and require training standards for private law enforcement personnel acceptable to TSA, if the State and local jurisdictions in which the airport is located do not prescribe training standards for private law enforcement personnel that meets the standards in paragraph (a) of this section.

(3) Include training in -

(i) The use of firearms;

(ii) The courteous and efficient treatment of persons subject to inspection, detention, search, arrest, and other aviation security activities;

(iii) The responsibilities of law enforcement personnel under the security program; and

(iv) Any other subject TSA determines is necessary.

(d) Each airport operator must document the training program required by paragraph (a)(4) of this section and maintain documentation of training at a location specified in the security program until 180 days after the departure or removal of each person providing law enforcement support at the airport.

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