

CPTED: INTERPRETING CONTEMPORARY
SECURITY PRACTICES IN THE ERA
OF HOMELAND SECURITY

by

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Presented to the Faculty of the Graduate School of
The University of Texas at Arlington in Partial Fulfillment
of the Requirements
for the Degree of

MASTER OF ARTS IN CRIMINOLOGY AND CRIMINAL JUSTICE

THE UNIVERSITY OF TEXAS AT ARLINGTON

August 2007

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ACKNOWLEDGEMENTS

I would like to thank the Lord for providing the means and opportunity with which I was able to continue my education. I would also like to thank: My grandfather, who led by example and proved everyday that life is what you make of it; to my grandmother, who taught me that inner peace can be achieved amidst personal struggle; to my mother, who caught me when I fell and gave me the wings with which I soar; to my sister Nicole, who listened when I lost direction and gently kicked me in the `ōkole to get me on my way again; to my Texas family, who left me alone when I needed to work and crowded around when I needed to play; to my family on the west coast, whose understated support was felt across the miles; and to my friend, Alex del Carmen, who gave me unlimited support, patience, and encouragement when I needed it most.

This thesis is dedicated to my beautiful daughter, Ashtyn, who was with me every step of the way and whose existence inspires me to be a better person.

August 6, 2007

ABSTRACT

CPTED: INTERPRETING CONTEMPORARY
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Publication No. _____

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The University of Texas at Arlington, 2007

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The actions taken by the United States Government to increase domestic security in the wake of the September 11, 2001 terrorist attacks, under the guise of homeland security, clearly make use of the techniques and philosophies of crime prevention through environmental design (CPTED). Therefore, the purpose of this study is to examine components of Homeland Security's domestic response to terrorism, specifically the airport security measures implemented as a result of the 9/11 attacks, and demonstrate that they are, in fact, components of the CPTED general theorem. However, because the Department of Homeland Security has not recognized these

techniques as components of CPTED, they are not realizing the benefits that crime prevention through environmental design offers within the arena of homeland security, specifically, airport security.

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CHAPTER 1

INTRODUCTION

“They were the most lethal terrorist attacks in history, taking the lives of 3,000 Americans and international citizens.”

FBI website

At approximately 8:45am (Eastern Standard Time) on September 11, 2001, a Boeing 767 crashed into the North tower of the World Trade Center in Manhattan, New York (www.fbi.gov). The plane exploded in a series of fireballs as it was swallowed by the 110 story structure. Glass, steel, and concrete showered the area surrounding the North tower as people ran for cover and struggled to comprehend what they had just witnessed. As men and women flooded out of the North tower others rushed in to help with the evacuation. Paramedics, police officers, and firefighters from the city of New York sacrificed their lives in valiant attempts to save others (Simonsen & Spindlove, 2004).

The world watched the scene unfold in disbelief and horror. Camera crews and newsmen scrambled to get the pictures and story of this catastrophic event (Dudziak, 2003). They could not have known that the camera was about to capture a replay of the atrocity. At approximately 9:05am (Eastern Standard Time) another Boeing 767 crashed into the South tower of the World Trade Center (www.fbi.gov). Twin infernos filled the skyline of lower Manhattan with dense smoke. Inside the towers, heat generated from the burning jet fuel began to soften and melt the support columns (Clifton, 2001). First

the South tower began to falter, the upper floors collapsed onto the lower. The North tower collapsed less than thirty minutes later, it too fell nearly straight down upon itself (Clifton, 2001). Less than two hours after the first crash, both the North and South towers of the World Trade Center, 200,000 tons of steel, 425,000 cubic yards of concrete, and more than 600,000 square feet of glass (Clifton, 2001), were reduced to a titanic, smoldering mountain of rubble. The fires at ground zero, the location where New York's two tallest building once stood, burned for 99 days finally being extinguished on December 19, 2001 ("September 11," n.d.).

The FBI has summarized the initial events of September 11, 2001 as follows:

On the morning of September 11, 2001, at 8:45 a.m., hijacked American Airlines Flight #11 crashed into the North Tower of the World Trade Center in New York City. Twenty minutes later, another hijacked plane, United Airlines Flight #175, crashed into the South Tower. One hundred fifty-seven people were killed on the two planes, and thousands were killed in the towers and on the ground when the two towers collapsed. At 9:39 a.m., a third hijacked plane, American Airlines Flight #77, crashed into the Pentagon in Arlington, Virginia, killing 64 people on the plane and 125 on the ground. At 10:10 a.m., hijacked United Airlines Flight #93 crashed in Stony Creek Township, Pennsylvania, killing 44 passengers and crew (www.fbi.gov).

The purpose of this study is to examine components of Homeland Security's domestic response to terrorism, specifically the airport security measures implemented as a result of the 9/11 attacks, and demonstrate that they are, in fact, components of the crime prevention through environmental design general theorem.

Prior to September 11, 2001, terrorism was not something with which Americans were concerned (Harf & Lombardi, 2005). Terrorist attacks happened in the world but they occurred in far away places with unknown victims. The United States

was seemingly immune to the terrorist violence that plagued other parts of the world; distance meant security (Harf & Lombardi, 2005). The horrific events of September 11, 2001 (hereafter referred to as 9/11), would catapult the United States into a new era, an era of fear, insecurity, and doubt. The United States, the world, has entered a “post 9/11” era, an era in which terrorism has become something that is up close and personal (Harf & Lombardi, 2005).

There was a legitimate sense of anger and injury which renewed American national identity about the meaning and power of the United States. “We will find these people and they will suffer the consequences of taking on this nation” (“America Under Attack” ¶ 76), vowed President George W. Bush in 2001.

The ensuing large-scale FBI investigation, code-named “PENTTBOM”, into the attacks determined that a group of 19 Middle Eastern men, militant Muslim extremists linked to the Al Qaeda terrorist network (www.fbi.gov), hijacked four passenger airliners and used them as weapons of mass destruction (Harf & Lombardi, 2005).

The immediate response of the United States was set in motion shortly after the second plane sliced through the south tower of the World Trade Center in New York (Hirrel, 2003). The first priority was to take precautionary measures against further attack. With this aim, President Bush implemented the government’s emergency response plans and the military was put on high alert worldwide (Hirrel, 2003). The Federal Aviation Administration (FAA) closed United States air space; no civilian aircraft was permitted to take off, those flights already in route were ordered to land at the nearest practical airport, and international flights bound for the United States were

redirected to Canada. This suspension of civilian, both commercial and private, flights lasted until September 14, 2001 (Costello, 2005). Military presence was increased at United States ports of entry, including sea ports, borders, and airports. United States naval assets were repositioned to aid in the air defense of the United States. For example, the carrier U. S. S. George Washington was positioned to protect the northeastern coast of the United States (Hirrel, 2003). Other measures taken to augment security at the White House, Capitol, and other national monuments around the country included, but were not limited to, street closures, strategically placed concrete barricades, fences, and increased number of checkpoints and police forces, and an increase in the use of metal detectors, surveillance cameras, and x-ray machines (Kiely, 2002).

In the wake of 9/11, airport and airline security was highly scrutinized (Nicholson, 2005). The commencement of air travel brought new policies and procedures to the flying public, among them: Parking restrictions, suspension of curbside check-in, access to gates limited to ticketed passengers, photo identification required at check-in and to pass through security checkpoints, name on identification had to match the name on the boarding pass, heightened checkpoint screening and security, presence of armed guardsmen at security checkpoints and throughout airport, limitation on carry-on items (Committee on Commerce, Science, and Transportation, 2001). While these and other target-hardening techniques were being employed to increase security, the government went to work to create legislation and strong new statutes designed to further improve domestic security, more fully protect the United

States from terrorist attacks, and aid in the war on terror (Nicholson, 2005). Ultimately, the United States would respond on two fronts; the domestic front and the international front.

On the domestic front, Hirrel (2003) states that the priority was to protect America against further terrorist attacks. Some of the actions taken to increase security on the home-front included, but were not limited to: The creation of the Department of Homeland Security, the passage of the PATRIOT Act, implementation of a color-coded threat awareness system, military presence at airports, heightened airport security measures for screening passengers and luggage, the federalization of airport security and the creation of the Transportation Security Administration, and aviation security reform (Committee on Governmental Affairs, 2001).

On the international front, the United States adopted strategically offensive measures to aid in the overall defense of the United States (Hirrel, 2003). Some of the actions included, but were not limited to: Economic sanctions and political pressure on countries believed to support terrorism or harbor terrorist groups (Hirrel, 2003), “We will make no distinction between the terrorists who committed these acts and those who harbor them” (“Statement by the President,” 2001, ¶ 9).

The majority of world leaders condemned the attacks and support for the United States’ right to defend itself was expressed across the world (Harf & Lombardi, 2005), and by the United Nations Security Council; “Nations of the world were virtually unanimous in their support of the United States and the war on Al Qaeda” (Nicholson, 2005, p. xvii). On September 19, 2001, the United States Congress authorized President

Bush to use “all necessary and appropriate force” (Hirrel, 2003, p. 7) against terrorists and the nations or individuals that supported them. As mentioned previously in this chapter, the extensive FBI investigation into the attacks linked the 9/11 hijackers to Al Qaeda and Osama Bin Laden, leader of the terrorist network. While the Taliban government in Afghanistan was among those that denounced the terrorist attacks against the United States, they refused to cooperate with the United States’ demands to surrender Osama bin Laden and his operatives (“September 11, 2001,” n.d.). As a result, in October 2001, the United States invaded Afghanistan (Hirrel, 2003).

As the purpose of this study is to examine components of Homeland Security’s domestic response to terrorism, specifically the airport security measures implemented as a result of the 9/11 attacks, and demonstrate that they are, in fact, components of the crime prevention through environmental design general theorem, it is vital that the reader understand the basic philosophical tenets of crime prevention through environmental design.

Crime prevention through environmental design is the concept that manipulations of the built environment will reduce the incidence of crime (Crowe, 2000). According to Jeffery (1977), there are three fundamental aspects of CPTED: Natural surveillance, natural access control, and natural territorial reinforcement.

Natural surveillance is the concept of keeping all areas of a space easily observable by people engaged in normal activities. Natural surveillance is promoted when the placement of physical features, activities, and people maximize visibility of the surrounding environment (“Crime Prevention,” City of Mesa, n.d.).

Natural access control is the concept of decreasing criminal opportunity by denying access to targets. Natural access control is promoted by strategically placing structural elements, such as entrances and exits, fencing, lighting, and landscaping features, to control the flow of or limit access to sensitive areas (“Crime Prevention,” City of Mesa, n.d.).

Natural territorial reinforcement is the concept that the physical design of an area can “create or extend a sphere of influence” (“Crime Prevention,” CPTED-Watch, n.d., 2) and increase the occurrence of legitimate users developing a sense of territorial control or ownership (“Crime Prevention,” CPTED-Watch, n.d.). Natural territorial reinforcement is promoted when physical elements such as fencing, signs, lighting, and landscaping are used to express ownership and define public, semi-public, and private space (“Crime Prevention,” City of Mesa, n.d.).

All of these techniques are part of the theoretical framework of crime prevention through environmental design (hereafter referred to by the acronym CPTED, pronounced sep-ted). CPTED is based on the premise that the “proper design and effective use of the built environment can lead to a reduction in the fear and incidence of crime, as well as an improvement in the quality of life” (National Crime Prevention Institute, CPTED-Watch, n.d.).

The United States government has failed to identify the Homeland Security techniques being employed at the nation’s airports as being part of the CPTED approach. Therefore, as a country, the United States is considering these as new, innovative techniques when in fact they have been used in previous instances in

different eras of United States and European history. Therefore, the purpose of this study is to examine components of Homeland Security's domestic response to terrorism, specifically the airport security measures implemented as a result of the 9/11 attacks, and demonstrate that they are, in fact, components of the crime prevention through environmental design general theorem. Also, once these security measures are recognized as CPTED techniques, it is important to learn from history with regards to their successes and failures and apply what has been learned in order to enhance our mechanisms of preventing violent attacks, specifically terrorist attacks.

Definitions of Terms

For the purpose of this study, the following definitions apply:

Terrorism: The unlawful use of force or violence against persons or property to intimidate or coerce a Government, the civilian population, or any segment thereof, in furtherance of political or social objectives (www.fbi.gov).

Terrorist: A person who uses or favors violent and intimidating methods of coercing a government or community (Oxford American Dictionary of current English, 1999).

America: The United States of America.

American: Citizens of the United States of America.

Nation or Country: The United States of America.

Natural: Desired results as a byproduct of the normal and routine use of the environment (Crowe, 2000).

Environment: The physical surroundings within which elements and features can be manipulated (Crowe, 2000).

In chapter two of this study the author presents a review of the literature on the topics of CPTED and Homeland Security.

Chapter three will consist of the methodology. The author will conduct a qualitative study utilizing a content analysis methodology to fulfill the stated purpose of this study.

In chapter four the author will present the findings of the study, that is, the author will identify the aspects of homeland security that are actually part of the CPTED general theorem.

In chapter five the author will complete the study with a discussion of the policy implications related to the author's findings.

CHAPTER 2

LITERATURE REVIEW

“It is our argument that the physical environment plays a critical role in behavior, including criminal behavior.”

C. Ray Jeffery, 1977

The purpose of this study is to examine components of Homeland Security’s domestic response to terrorism, specifically the airport security measures implemented as a result of the 9/11 attacks, and demonstrate that they are, in fact, components of the crime prevention through environmental design general theorem.

In this chapter the author will present a review of the literature on crime prevention through environmental design (CPTED). It is important that the reader understand the philosophy of CPTED, as well as the role CPTED has played in history, in order to recognize that the Homeland Security techniques being employed at the Nation’s airports are elements of CPTED.

Crime prevention through environmental design is a concept articulated in the early 1970s by criminologist C. Ray Jeffery. However, the practice of using environmental features for protection is not a novel one (Crowe, 2000). However, twenty-first century crime prevention must take into account the technological instruments available to criminals as well as the usefulness, and ease of use, for the legitimate user of the space (Crowe, 2000). According to Jeffery (1977), the key to

environmental design is to facilitate security without inhibiting aesthetics or ease of use for the legitimate users of an area.

CPTED Worldwide

While the United States Government is employing CPTED principles in the field of airport and aviation security, countries around the world, such as Canada, England, Japan, Netherlands and Australia, are actively pursuing CPTED related research and programs (Crowe, 2000). According to Crowe (2000), the process is an evolution toward a simpler model of CPTED that, in most cases, becomes an integrated part of a comprehensive planning process for crime control. The formal definition of crime prevention as adopted in these countries is, “The anticipation, recognition and appraisal of a crime risk and the initiation of some action to remove or reduce it” (“The Practice,” 1978, p. 1-2).

Crime prevention strategies that compete with Jeffery’s CPTED model are not limited to efforts outside of the United States. There are CPTED practitioners that prefer an organized and mechanical approach versus the natural approach of Jeffery’s model (Crowe, 2000). Another group within the CPTED movement, according to Crowe (2000), casually blends the three strategy areas, the organized, mechanical, and natural approaches. These competing approaches may also be viewed as a crime control strategies versus a natural planning model.

In the early 1970s architect Oscar Newman developed the concept of defensible space for use in the public housing environment and other similar residential settings. Newman’s defensible space model shares the basic characteristics of Jeffery’s CPTED

model; natural surveillance, natural access control, and territorial reinforcement. However, defensible space assumes that changes to the physical environment will result in citizens becoming “defenders”, guarding places that matter to them (“The CPTED page,” n.d.). Although there are similarities to CPTED, it is important to note that defensible space is not the same as crime prevention through environmental design. Defensible space focuses more on encouraging a defensive or protective mindset by the public and less on directly affecting offender decision making (“The CPTED page,” n.d.).

Defensible space is not the only crime prevention model that competes with Jeffery’s CPTED philosophy. Other programs include: Security by design, natural crime prevention, environmental security, situational crime prevention, place-specific crime prevention, and safer cities. While these alternative strategies may include common CPTED elements, they do not stress the natural approach to prevention emphasized in Jeffery’s model. In contrast, these programs highlight other processes such as target hardening, activity support, physical security, law enforcement, and procedural security measures (Crowe, 2000). By incorporating traditional crime prevention techniques, as well as law enforcement strategies, these competing concepts attempt to create a crime prevention approach that builds on Jeffery’s natural CPTED philosophies. Still, CPTED planners know that CPTED strategies and principles do not entirely replace other crime prevention approaches. However, according to Crowe (2000), they do realize that a high priority should be placed on natural strategies that facilitate prevention within the built environment.

Historical Overview

Crime prevention through environmental design is a concept articulated through the work of C. Ray Jeffery and his 1971 book of the same name (Beverly Hills, CA: Sage). Although the concept of using the environment to facilitate security is not a new one in history, it was not academically identified as a crime prevention technique prior to Jeffery's work. Crowe (2000) contends that CPTED is a contemporary approach that has an old background. A look at history reveals a strategic use, at a basic level, of the environment to enhance safety and security as well as influence behavior.

Crowe (2000) points out that it may have perhaps been easier for ancient humans to appreciate and respect their dependence on the environment. The environment provided sustenance as well as challenges to survival. To survive, early humans had to adjust to their environment because there were limits to the type and amount of changes they could make; adaptation was the rule (Crowe, 2000).

Border definitions and symbolic barriers were important to early humans in their efforts to create ownership. Cave dwellers painted exterior and interior walls with stories of their past. They cleared the areas in front of their caves, stacked rocks along the perimeter of the area that they claimed, or strategically placed ornamented sticks to mark their space. They did these things to visibly alter the space so that others would observe that the area was different from the surrounding space, thus signifying ownership and controlled space (Crowe, 2000). These are fundamental territorial behaviors and, as Crowe (2000) points out, the territorial nature of human beings has

changed little over the last 5,000 years and remains a powerful factor in controlling behavior.

Using design to foster security also has its origins in the early history of the development of communities; early Sumerian codes dating back to 4000 B.C. identified the importance of respect for property rights, while the Codes of Hammurabi (2000 B.C.) introduced the responsibilities of builders to their clients (Crowe, n.d.). Hammurabi's Code was also the first early attempt to establish a legal basis for an orderly and just approach to crime control which included, among other things, an approach to crime prevention through environmental design ("The Practice," 1978).

Societies have practiced crime prevention of some crude sort throughout history. Various mutual protection activities by members of neighboring communities to defend against enemy attack have occurred in every culture. The use of natural and man-made barriers for protection against unwanted intrusion predates recorded history; "primitive tribesmen fortified hilltops that evolved into elaborate strongholds with high stone walls and were often surrounded by moats or built on the top of sheer cliffs" ("The Practice," 1978, p. 5-3). Native American cliff dwellers, for example, developed familial hierarchies and community identity through the design of living space, building protected living areas on the face of cliffs accessible only by ladders (Crowe, n.d.).

Eighth century Chinese practitioners of the art of Feng Shui promoted harmony by manipulating the spatial environment from the smallest rooms to the planning of cities (Crowe, 2000). While Feng Shui has some mystical elements, it also has many practical, commonsensical theories and observations about how people respond to space

management and design. According to Crowe (2000), CPTED and Feng Shui share the observation that, for legitimate users of space, negative cues produce fear and avoidance behaviors while positive cues produce desired responses and behaviors. Crowe (2000) also asserts that Feng Shui may provide another tool for helping CPTED planners understand the interaction between humans and their environment.

Throughout history, there has been an awareness of how the environment shapes and effects human behavior. Architects, city planners, and residential dwellers have customarily used environmental features to elicit desired behavior and discourage undesired behavior. During the early period of the Greek empire the designers of temples used environmental cues to affect and influence behaviors. For example, a sensation of fear was achieved by the absence of light. In another example, early city-states, such as Florence, designed assembly chambers to create the impression that the roof would cave in, literally, creating a sense of anxiety which served to speed up the legislative process (Crowe, 2000).

Although crime prevention through environmental design is itself relatively new, its individual elements are common security techniques that have been in use for generations (Gardner, n.d.). Environmental cues influence the perceptions and behaviors of all users of space. Lighting, for example, has two purposes within the CPTED conceptual model: (1) illumination of human activity and (2) security (Crowe, 2000). Environmental cues, such as lighting, will have opposite effects on legitimate and illegitimate users of space. A well lit area will convey the perception of security for the legitimate user while signaling to the illegitimate user a higher risk of detection

(Crowe, 2000). Perhaps the only environmental cue that has the same effect on all users, according to Crowe (2000), is distance. The farther an individual is from a potential threat, the easier it is to manage.

Another environmental feature that has been used as a defense throughout history is height. The average person or family went to bed when the sun set and got up when the sun rose, only deviant people went out at night, so height barriers were used for personal defense (Crowe, 2000). Dwellings were designed so that only the ground floors were used for daytime activities. The ladders that were used to go to upper floors would be pulled up at night, thus denying access to sleeping residents and high value areas (Crowe, 2000).

Height has also been used on the macro scale to protect whole communities which is evident in the remains of cities and castles in medieval Europe. According to Crowe (2000), San Marino, located in Northeast Italy, is a classic example. The tiny country is less than one square mile and is perched atop a mountain. By utilizing the natural element of height offered by the environment, San Marino founders ensured the security of the country and, accordingly, it has never been conquered (Crowe, 2000). In many situations, height is used to facilitate visibility as well as symbolize power and authority. Examples of this are found throughout history as well as in contemporary settings; lifeguard towers, judges' benches, guard towers, etc. (Crowe, 2000).

While designers of Greek temples used the absence of light to elicit fear, lighting was also used to improve security. According to Crowe (2000), the first wide scale use of outdoor lighting in history to protect property took place between 1700 and

1701 in Paris, France. Louis XIV of France initiated a massive security program that culminated in the installation of nearly 7,000 street lamps when vandals repeatedly damaged and defaced the broad boulevards and extensive landscaping.

Although the idea of using aspects of the physical environment as protection against attack dates back to the caveman, it was not until recently that the issue was approached from both the physical and psychological aspects of prevention simultaneously (Gardner, n.d.). This blend of disciplines, Gardner (n.d.) contends, is the essence of the CPTED concept.

del Carmen and Robinson (2000) demonstrate that the theoretical components of CPTED are broader than they are currently understood in the field of criminology. They do this through an examination of an era in American history referred to as the “era of consumption”. During this period, from the early 1800s through the early 1900s, consumption, known today as tuberculosis, was plaguing cities across the United States (del Carmen and Robinson, 2000). During this time period, efforts to control the spread of this illness were achieved through CPTED strategies. According to del Carmen and Robinson (2000), these efforts included, but were not limited to: educational campaigns aimed at promoting lifestyle changes; travel and relocation efforts; altering inner-city conditions conducive to the spread of the illness; and incarceration.

The efforts employed to control the spread of tuberculosis “demonstrate that CPTED has been in practice for longer than it is currently given credit for in the discipline of criminology “(del Carmen and Robinson, 2000, p.269). del Carmen and Robinson (2000) also demonstrate that CPTED strategies, used for centuries in the

United States, precede the academic writings of those considered to be the founders of CPTED. “Broadening the scope of CPTED beyond its current standing facilitates to increase the understanding of, and appreciation for, the vital role that CPTED strategies have played in the history of crime prevention in the United States” (del Carmen and Robinson, 2000, p.268).

Crime prevention scholars agree that the goal of CPTED is to reduce the opportunity for crime to occur (Gardner, n.d.). The use of CPTED techniques will reduce crime and fear of crime by reducing criminal opportunity, resulting in a positive social interaction among legitimate users of space, or, those using a space for its intended purpose (“Crime Prevention,” n.d.). The emphasis of CPTED is the prevention of crime rather than the apprehension and punishment of criminals. However, the current criminal justice system has traditionally been one of reaction, going into effect only after a crime has been committed. Once a crime has occurred and the system has been activated, the police, courts, and correctional system are responsible for crime control (Jeffery, 1977). According to Jeffery (1977), this approach is one of an ineffective, disjointed system.

Some CPTED scholars would argue that CPTED techniques are a basic and common sensical approach to crime prevention (Crowe, 2000). It is only by examining and acknowledging the use of, and success of, CPTED strategies historically, that the strategies can be effectively applied.

Theoretical Beginnings of CPTED

Practitioners and scholars of crime prevention through environmental design (CPTED) recognize C. Ray Jeffery as the originator of the CPTED concept (Robinson, 1999). There are other authors, however, that precede Jeffery in showing an early interest in CPTED related theories. In his article, *The Theoretical Development of 'CPTED': 25 Years of Responses to C. Ray Jeffery*, Matthew Robinson (1999) traced the theoretical beginnings of the CPTED philosophy. Robinson reviews the work of Jane Jacobs, Schlomo Angel, Elizabeth Wood, Oscar Newman, and C. Ray Jeffery.

In *The Death and Life of Great American Cities* (1961), Jane Jacobs stressed the importance of territorial identity and natural surveillance (Crowe, 2000) as controls for criminal behavior. She argued that the urban renewal strategies of the day were undermining the safety of the streets, that isolating neighborhoods actually promoted crime because it led to a decrease in meaningful interaction between residents (Robinson, 1999) thereby decreasing the natural surveillance of the area.

As Crowe (2000) states, Jacobs pointed out that the new forms of urban design broke down many of the traditional or “natural” controls on criminal behavior. She also suggested that the lack of “natural guardianship” in the environment promoted crime and that “crime flourished when people did not know and meaningfully interact with their neighbors” (Robinson, 1999, p. 430). In her 1961 book, Jacobs listed three basic attributes that were needed to make a city street safe: Clearly defined public and private space, diversity of use, and a high level of pedestrian activity (Robinson, 1999).

“Jacobs’ work emerged as a founding text for a new way of seeing cities” (“Crime Prevention,” n.d., Wikipedia, p.2).

Robinson (1999) also considers Schlomo Angel to be another early pioneer of CPTED. Angel stated in his Ph. D. thesis (1968) that “The physical environment can exert a direct influence on crime settings by delineating territories, reducing or increasing accessibility by the creation or elimination of boundaries and circulation networks, and by facilitating surveillance by the citizenry and police.” (Angel, 1968, as cited in “Crime Prevention,” n.d., p.2).

Angel, like Jacobs, asserted that the level of criminal activity is inversely related to the level of activity on the street (“Crime Prevention,” n.d.); less activity equals less surveillance which in turn equals more opportunity for criminal activity to go unseen. Angel developed and published CPTED-related concepts in 1970 in work supported and widely distributed by the United States Department of Justice (Luedtke, 1970).

Robinson (1999) continued his look at the theoretical development of CPTED with the work of Elizabeth Wood. Wood developed guidelines for addressing security issues while working with the Chicago Housing Authority in the 1960s. According to Robinson (1999), Wood placed emphasis on design features that would support natural surveillance of the area by residents. Although the guidelines that Wood developed were never implemented, they stimulated some of the original thinking that led to Jeffery’s concept of CPTED (“Crime Prevention,” n.d.).

Oscar Newman (1972) is another whose work is included in Robinson’s (1999) historical look at CPTED. As previously mentioned, defensible space is not the same

concept as CPTED. However, according to Robinson (1999), Newman demonstrated the importance of natural surveillance, access control, and territorial concern in his 1972 book, *Defensible Space* which overlaps with Jeffery's CPTED philosophies. Newman, like Wood before him, identified a relationship between space management and design and crime in public housing environments (Crowe, 2000).

C. Ray Jeffery coined the phrase, crime prevention through environmental design, in his 1971 book of the same name (Beverly Hills, CA: Sage). CPTED, as Jeffery (1977) uses the term, has a broad scope: "Any activity taken before a crime is committed that will reduce or eliminate the occurrence of crime" (p. 45). "The more diverse layers of deterrence strategies that are employed, the more likely that an offender will be persuaded to change his or her plans" ("The CPTED page," n.d., FAQ).

According to Jeffery (1977), crime prevention programs are based on: (1) A shift from a punishment or treatment model to a prevention model, (2) An interdisciplinary theory of behavior which is psychobiological in nature, and (3) An appreciation for the role of the physical environment in behavior, including criminal behavior. In order for the criminal justice system to be effective, the effectiveness of punishment and treatment must be implicit (Jeffery, 1977). Jeffery's 1971 book is based on the premise that neither punishment nor treatment is effective, nor will they be effective (Jeffery, 1977); logic demands a new approach to crime control.

Jeffery's view of crime prevention goes beyond target hardening and includes basic issues concerning human behavior and learning theory (Jeffery, 1977). Jeffery

(1977) reasoned that a successful crime prevention program has several distinct characteristics:

1. It will be set in motion before the crime is committed, not after.
2. It will focus on direct controls over behavior, and not on indirect controls.
3. It will focus on the environment in which crimes are committed, and on the interaction of the organism with his environment, not on the individual offender.
4. It will be an interdisciplinary effort based on all disciplines dealing with human behavior.
5. It will be less costly and more effective than punishment or treatment. (p.37)

Jeffery (1977) uses the term 'prevention' in the primary sense, which is, to prevent the act before it takes place. Primary prevention makes use of direct controls which are measures directly related to the prevention of the criminal act, not indirect measures such as anti-poverty programs, ego development, and education (Jeffery, 1977). Society tries to eradicate social problems solely by treating people rather than changing the environment in which the problems originate. "The ecological distribution of crime in relation to the physical environment is a critical aspect of environmental design and crime prevention" (Jeffery, 1977, p. 41); Jeffery (1977) argues that the physical environment plays a critical role in behavior, including criminal behavior. Criminologists have traditionally emphasized the traits of the individual offender while ignoring the physical environment in which crimes are committed (Jeffery, 1977).

Traditionally, discussions on the topic of crime have focused more on law enforcement and correctional system initiatives – reactive measures – than on preventative measures ("Crime Prevention," CPTED-Watch, n.d.). Likewise, security concerns were not given a high priority during the planning and design phases of the building process, and few serious attempts were made to develop a workable

philosophy for controlling crime through architectural planning and design (Gardner, n.d.).

In the late 1960s, however, the Federal government began to take an interest in crime prevention techniques in the urban housing environment (Gardner, n.d.) and architects and designers began to see the need to build with the threat of crime in mind (“Crime Prevention,” CPTED-Watch, n.d.). This shift in thought brought forth a new approach to crime prevention, one that relies on an understanding of how the environment influences offender behavior, crime prevention through environmental design (“The CPTED page,” n.d.). While the Federal Government recognized the benefits of applying CPTED techniques in residential settings more than thirty years ago, they have failed to apply the same principles to the airport environment.

The crime prevention principles of CPTED go beyond the traditional target hardening techniques of locks on doors and bars on windows. It is a philosophy of preventing crime by designing a physical environment that positively influences human behavior (“Crime Prevention,” CPTED-Watch, n.d.). “Crime prevention is a simple and direct approach that protects the potential victim from criminal attack by anticipating the possibility of attack and eliminating or reducing the opportunity for it to occur” (“The Practice,” 1978, p. 1-1). Thus, the conceptual force of the CPTED philosophy is that the physical environment can be manipulated to produce desired behavioral effects that will lead to a reduction of fear and incidence of crime.

As Crowe (2000) points out, the CPTED philosophy embodies several concepts. Firstly, the term environment includes people and their physical and social

surroundings. Secondly, the term design includes the physical, social, management, and law enforcement directives that seek to positively affect human behavior as people interact in and with their environment (Crowe, 2000). Thus, Crowe (2000) continues, CPTED programs aspire to prevent certain crimes within a defined environment by manipulating the variables that are closely related to the environment itself. They seek to develop solutions that involve the variables that can be evaluated and manipulated in the specified human / environment relationship (Crowe, 2000).

In this regard, CPTED involves the designing of physical space that will support the intended use of the space, the needs of legitimate users, and the predictable behavior of both legitimate users and offenders (“The Practice,” 1978). Therefore, according to Crowe (2000), proper CPTED design recognizes the designated use of the space, identifies the crime problem associated to the area, defines the solution compatible with the designated use, and incorporates the crime prevention strategies that enhance the effective use of the space. To achieve this approach, CPTED draws on physical and urban design strategies as well as on contemporary thinking in the behavioral and social sciences and law enforcement organizations (Crowe, 2000).

The CPTED emphasis on design departs from the customary target-hardening approach to crime prevention. Traditional target-hardening focuses primarily on denying access to a crime target through the use of physical or artificial barriers. However, the use of target-hardening techniques alone frequently leads to constraints on the use, access, and enjoyment of the hardened environment (Crowe, 2000). This

traditional approach tends to over look opportunities for natural access control and natural surveillance, fundamental aspects of the CPTED philosophy.

Practitioners of CPTED understand that it is possible to adapt normal and natural uses of the environment to accomplish the same effects of artificial or mechanical hardening and surveillance (Crowe, 2000). However, target-hardening strategies may be employed within a CPTED program when they appear to be justified and when they will not unduly impair the effective use of the environment (Crowe, 2000). Unadulterated CPTED programs involve the effort to integrate design, citizens and community action, and law enforcement strategies to accomplish natural access control, natural surveillance, and territorial reinforcement that are consistent with the design and intended use of the environment (Crowe, 2000).

Crowe (2000) asserts that traditional “access control and surveillance, as design concepts, have emphasized mechanical or organized crime prevention techniques while overlooking, minimizing, or ignoring attitudes, motivation, and uses of the physical environment” (p. 37). Recent approaches, however, have shifted the emphasis of design to natural crime prevention techniques, attempting to use natural opportunities for crime prevention presented by the environment. This shift in emphasis has led to the concept of territoriality (Crowe, 2000).

According to Crowe (2000), “The concept of territoriality suggests that physical design can create or extend a sphere of influence so that users develop a sense of proprietorship and potential offenders perceive that territorial influence” (p. 37). Scholars of CPTED recognize that natural access control and natural surveillance

contribute to a natural sense of territoriality. Efforts to achieve a balance between designing for crime prevention and designing for effective use of environments contributed to the shift in focus from organized and mechanical strategies, per se, to natural strategies. Natural strategies exploit “the opportunities of the given environment to naturally and routinely facilitate access control and surveillance, and to reinforce positive behavior in the use of the environment” (Crowe, 2000, p. 37).

Crowe (2000) contends that there has been a recent resurgence of interest in the concept of CPTED and that “The CPTED concept calls for integrating natural approaches to crime prevention...rather than responding to crime problems after they materialize” (p. 45). Crime prevention through environmental design is about being proactive rather than reactive. It is a multi-disciplinary approach to reducing crime by influencing offender behavior by manipulating the physical environment of a target area (Gardner, n.d.). Proper CPTED design will discourage crime, without creating a prison-like environment, while encouraging legitimate use of the environment. Fortress-type features are minimized and integrated into the overall design thereby minimizing their negative impact (Gardner, n.d.). Crowe (n.d.) states that CPTED is “one of the most promising and currently effective approaches to reducing the opportunity for crime” (¶ 1).

There are many case studies that demonstrate how the application of CPTED concepts has reduced the incidence of crime and fear of crime. In the early 1970s, several studies financed through the Law Enforcement Assistance Administration and the Department of Housing and Urban Development demonstrated that architectural

design could be used effectively to influence crime rates in housing developments (Crowe, 2000). One example to illustrate how CPTED techniques were implemented is found in Gainesville, Florida. The CPTED-related ordinance placed special requirements on the convenience industry (Crowe, 2000). Among other things, the ordinance required that stores provide security training, remove signs from windows, increase the number of store employees after 9:00pm, and increase internal lighting at night.

Using CPTED techniques has produced significant results in residential areas, convenient food stores, malls and shopping centers, transit stations, and parking structures (Crowe, 2000), reducing criminal activity as much as 40% in some communities (CPTED-Watch, n.d.). Additional studies have shown that by combining security hardware, psychology, and site design, a physical environment can be developed that would, by its very nature, discourage crime (Gardner, n.d.). The goal of CPTED is to reduce the opportunity for crime. Therefore, it is something that has the potential of achieving results over the long term.

The independent elements of the CPTED strategy may be manipulated to affect legitimate users of space or be planned to influence the behavior of illegitimate users (Crowe, 2000). “No matter how the environment is planned or manipulated, however, it is important to place the need for crime prevention within a working framework of the environment” (Lab, 1988, p. 11).

Jeffery’s (1977) CPTED concept expands upon the assumption that the proper design and effective use of the built environment can lead to a reduction in the

incidence of crime (Crowe, 2000). This translates into many practical and useful applications of CPTED as conceptualized by Jeffery (1977). Crowe (2000) contends that a practical guide to the use of CPTED concepts is necessary because the research literature has yet to thoroughly investigate the considerable small-scale applications of the CPTED concept.

While the theoretical components of crime prevention through environmental design have an old background, as demonstrated by a look at history, they are frequently held to be relatively recent developments in the field of American criminology; “It is this view of CPTED and its development in the United States that falls short of providing an adequate understanding of the vital part that CPTED has played, and can play, in the advancement of crime prevention theory and public policy” (del Carmen & Robinson, 2000, p. 267).

To fulfill the purpose of this study, which is to examine components of Homeland Security’s domestic response to terrorism, specifically the airport security measures implemented as a result of the 9/11 attacks, and demonstrate that they are, in fact, components of the crime prevention through environmental design general theorem, the author will continue with a review of the history and development of Homeland Security.

Homeland Security

“America needs a single, unified homeland security structure that will improve protection against today’s threats and be flexible enough to help meet the unknown threats of the future.”
DHS website

Prior to the terrorist attacks on the United States on September 11, 2001, what is now deemed as homeland security was perhaps better described as homeland defense (Feigenbaum, 2005). That day, however, the Nation’s lack of homeland security became violently clear and painfully apparent that a solely defensive mindset toward security was in itself inadequate to protect the Nation and its people. “The United States of America faced a watershed moment on September 11, 2001. The terrorist attacks shocked our nation into the realization that a major hazard existed for which preparedness was insufficient” (Nicholson, 2005, p xv). In short, it was a cruel realization that the United States was vulnerable.

At the federal level changes were made that were intended to address the nation’s vulnerabilities. President Bush and Congress responded quickly, passing new executive orders and other legislative measures. President George W. Bush signed into law The Homeland Security Act of 2002 on November 25, 2002 (Homeland Security Act, Public Law 107-296, H.R. 5005, sec. 2, 2002), just 75 days after the horrific attacks. Antiquated statutes were rewritten so law enforcement agencies and intelligence investigators could better share critical information (Nicholson, 2005). A massive congressional investigation, led by the 9-11 Commission, examined the precursor events of the attacks with the goal of recommending steps to make the United States safer in the future (Nicholson, 2005). The Department of Homeland Security was

created as a direct result of the September 11, 2001 terrorist attacks against the United States to create a more unified homeland security structure with a vision to preserve our freedoms and protect America (www.dhs.gov).

The National Strategy for Homeland Security defines Homeland Security as “a concerted national effort to prevent terrorist attacks within the United States, reduce America’s vulnerability to terrorism, and minimize the damage and recover from attacks that do occur.” (National Strategy for Homeland Security, Office of Homeland Security, The White House, July 2002, Introduction, p. 2. Retrieved July 9, 2007, from http://www.whitehouse.gov/homeland/book/nat_strat_hls.pdf). The essence of the government’s plan for securing the homeland is summarized on the Department of Homeland Security website and states:

The National Strategy for Homeland Security and the Homeland Security Act of 2002 served to mobilize and organize our nation to secure the homeland from terrorist attacks. This exceedingly complex mission requires a focused effort from our entire society if we are to be successful. To this end, one primary reason for the establishment of the Department of Homeland Security was to provide the unifying core for the vast national network of organizations and institutions involved in efforts to secure our nation. In order to better do this and to provide guidance to the 180,000 DHS men and women who work everyday on this important task, the Department developed its own high-level strategic plan. The vision and mission statements, strategic goals and objectives provide the framework guiding the actions that make up the daily operations of the department (Retrieved July 9, 2007, from <http://www.dhs.gov/xabout/strategicplan/>).

The Department of Homeland Security will be “a focused domestic defense agency which would guard our great country against those who seek to suppress our values and destroy our way of life by terrorizing our people” (Senator Lieberman, Committee on Governmental Affairs, June 20, 2002, p. 1).

The creation of the Department of Homeland Security (hereafter referred to as DHS) was “the most significant transformation of the United States Government since 1947” (Committee on Governmental Affairs, June 20, 2002, p. 27). Twenty-two formerly distinct agencies were merged (Nicholson, 2005) into a single department “whose primary mission is to protect our homeland” (Committee on Governmental Affairs, June 20, 2002, p. 27). This merger of agencies reorganized the nation’s homeland security structure, empowering “a single Cabinet official whose primary mission is to protect the American homeland from terrorism (Committee on Governmental Affairs, June 20, 2002, p. 78). The mission of the DHS is as follows: “We will lead the unified national effort to secure America. We will prevent and deter terrorist attacks and protect against and respond to threats and hazards to the nation. We will ensure safe and secure borders, welcome lawful immigrants and visitors, and promote the free-flow of commerce” (Retrieved July 9, 2007, from <http://www.dhs.gov/xabout/strategicplan/>).

The historic restructuring of the federal government brought together twenty two formerly independent agencies to create the third largest department in the federal government. The agencies that now make up the DHS are divided into four major directorates: Border and Transportation Security, Emergency Preparedness and Response, Science and Technology, and Information Analysis and Infrastructure Protection (www.dhs.gov).

The Border and Transportation Security directorate includes the following agencies: The United States Customs Service, Immigration and Naturalization Service,

Federal Protective Service, Transportation Security Administration, Federal Law Enforcement Training Center, Animal and Plant Health Inspection Service, and the Office for Domestic Preparedness (www.dhs.gov).

The Emergency Preparedness and Response directorate includes the following agencies: The Federal Emergency Management Agency, Strategic National Stockpile and the National Disaster Medical System, Nuclear Incident Response Team, Domestic Emergency Support Teams, and the National Domestic Preparedness Office (www.dhs.gov).

The Science and Technology directorate includes the following agencies: CBRN Countermeasures Programs, Environmental Measurements Laboratory, the National BW Defense Analysis Center, and the Plum Island Animal Disease Center (www.dhs.gov).

Information Analysis and Infrastructure Protection directorate includes the following agencies: The Federal Computer Incident Response Center, National Communications System, National Infrastructure Protection Center, and the Energy Security and Assurance Program. Additionally, the Secret Service and United States Coast Guard remain intact but are now located within the DHS (www.dhs.gov).

Within the organizational directorates of the DHS, there is a six-point agenda structured to guide the Department (www.dhs.gov):

1. Increase overall preparedness, particularly for catastrophic events.
2. Create better transportation security systems to move people and cargo more securely and efficiently.
3. Strengthen border security and interior enforcement and reform immigration processes.
4. Enhance information sharing with our partners.

5. Improve DHS financial management, human resource development, procurement, and information technology.
6. Realign the DHS organization to maximize mission performance.

This six-point agenda was developed in July 2006 “to ensure that the Department’s policies, operations, and structures are aligned in the best way to address the potential threats – both present and future – that face our nation” (www.dhs.gov).

Actions Taken to Improve Aviation Security

The Department of Transportation (DOT) took the following actions immediately after the 9/11 terrorist attacks to restore confidence in the Nation’s air transportation system (Committee on Commerce, Science, and Transportation, 2001):

- Increased patrols on and around airports; increased terminal inspections, typically using highly trained canine teams.
- Instituted more intensive random ID checks throughout the airport: at the ticket counter, the screening checkpoint, and the departure gate.
- Increased monitoring of vehicular traffic and removal of unauthorized vehicles.
- Allowed only ticketed passengers and authorized individuals beyond screening checkpoints.
- Steadily increased the number of Federal air marshals on domestic flights.
- Adjusted CAPPS (Computer Assisted Passenger Prescreening System) criteria for more intensive screening of all passengers to identify potential threats.
- Discontinued off-airport check-in.
- Required thorough inspection of all employee IDs; and required thorough inspection of all aircraft, including the interior and the galley, each day before passenger boarding begins (p.8).

Additional actions taken by the Department of Transportation to comply with key provisions of transportation security legislation that significantly changes, and improves, the methods of securing the Nation’s transportation system (Committee on Commerce, Science, and Transportation, 2001):

- Reduced operational access points at airports;
- Added Federal law enforcement officers at airports;

- Overseen a large deployment of National Guard troops at more than 400 airports;
- Increased distribution of name alerts;
- Required continuous use of all hand-wand metal detectors, explosive detection systems, and hand-checking of baggage, which means that even passengers not selected by CAPPs are subject to random search;
- Strengthened cockpit doors and put in place additional procedures to guard the flight deck; and
- Required all individuals with access to secure areas of airports, all screeners and all screener supervisors to be fingerprinted and undergo a criminal history record check (p.8).

Transportation Security Administration

The Aviation and Transportation Security Act was passed by the 107th Congress on November 19, 2001 (www.tsa.gov) to strengthen the security of the nation's transportation systems. The Act established the Transportation Security Administration (TSA) and outlined the agency's three major mandates: The Transportation Security Administration is responsible for the security for all modes of transportation; recruitment, assessment, training, and deployment of Security Officers for the 450 commercial airports nationwide; 100 percent explosives screening for all checked luggage (www.tsa.gov).

The Transportation Security Administration (hereafter referred to as TSA) is one of the components included within the Department of Homeland Security. The TSA is responsible for the security of the nation's transportation systems, including highways, railroads, buses, mass transit systems, seaports, and airports (www.tsa.gov).

“Our mission is to prevent terrorist attacks and to protect the US transportation network. In carrying out this mission, we strive always to be vigilant, effective and efficient.” (www.tsa.gov)

The TSA's vision, to "continuously set the standard for excellence in transportation security through its people, processes and technologies" (www.tsa.gov) is achieved by utilizing assets in such a way that they create a layer of security. The TSA's security strategy incorporates technologies such as biometrics, including retinal scans and fingerprint identification, explosive detection systems (EDS), explosives trace detection (ETD), and explosive trace portals (puffers); processes such as risk management, network management, random canine team searches, intelligence gathering and analysis, checking passenger manifests against watch lists, and continuous on-the-job training for security personnel; people, perhaps the most visible aspect of TSA's security strategy include trained and certified Transportation Security Officers, credentialed security inspectors, Federal Air Marshals, Federal Flight Deck Officers, armed security officers, and the TSA National Explosives Detection Canine Program (www.tsa.gov).

The technologies, processes, and people of the TSA work together to create layers of security that help to ensure the safety and security of the traveling public. "Each one of these layers alone is capable of stopping a terrorist attack. In combination, their security value is multiplied, creating a much stronger, formidable system" (www.tsa.gov).

Aviation Security

The United States Government responded to the 9/11 terrorist attacks "with an unambiguous, comprehensive increase in measures to enhance aviation security" ("Aviation," 2007, p. 1). The Aviation Transportation System comprises a broad

spectrum of private and public sector elements, including aircraft operators, more than 19,000 airports, and the National Airspace System (NAS), which presents thousands of points of entry for threats to people, aircraft, or infrastructure (“Aviation,” 2007). Therefore, the United States Government established a scalable, flexible aviation security system to respond to current and future threats, effectively reducing vulnerabilities within the aviation transportation system (“Aviation,” 2007). “Collectively, these security measures have created multiple barriers, greatly reducing the likelihood of a successful attack” (“Aviation,” 2007, p. 1).

The purpose of the Aviation Transportation System Security Plan (hereafter referred to as the Plan), as one element of the National Strategy for Aviation Security, is to “prevent terrorist attacks and other criminal or hostile acts, while minimizing the impact...by more rigorously, thoroughly, and effectively assessing and addressing vulnerabilities within the Aviation Transportation System” (“Aviation,” 2007, p. 3). The focus of the Plan is to prevent a successful attack by reducing vulnerabilities with a flexible set of protective measures and multi-layered protective approach. The Federal Government and its agents have incorporated within their Plan the fundamental elements of the CPTED philosophy, surveillance, access control, and territoriality, yet they have failed to recognize these elements as CPTED techniques.

The strategic goals and objectives of the Plan include: Maximizing domain awareness; deploying layered security; promoting a safe, efficient, and secure Aviation Transportation System; Enhancing international cooperation; and assuring continuity of

the Aviation Transportation System (“Aviation,” 2007). In executing the Plan, the

United States Government will:

- Utilize a risk-based approach to define security measures that strengthen critical security systems and reduce vulnerabilities in the Aviation Transportation System.
- Employ a layered security system to prevent the Air Domain from being used by terrorist groups, hostile nation-states, and criminals to commit acts against the United States, its people, or its infrastructure.
- Develop enhancements to the security of the Aviation Transportation System that facilitate safe, secure, and efficient travel and commerce both nationally and internationally (“Aviation,” 2007, p. 4).

Likewise, the strategic goals and objectives of the Plan utilize the three fundamental elements of CPTED yet they are presented as innovative notions toward security. The Government, therefore, does not reflect on past successes and failures of CPTED to build a stronger security strategy.

CHAPTER 3

METHODOLOGY

“The study of the processes and products of communication is basic to the student of man’s history, behavior, thought, art, and institutions. Often the only surviving artifacts that may be used to study human activity are to be found in documents.”
Holsti, 1969

The purpose of this study was to examine components of Homeland Security’s domestic response to terrorism, specifically the airport security measures implemented as a result of the 9/11 attacks, and demonstrate that they are, in fact, components of the crime prevention through environmental design general theorem.

This was a qualitative study which utilized the method of content analysis to uncover themes in airport security measures that employ the CPTED techniques of surveillance and access control.

The purpose of qualitative research is to achieve an in-depth understanding of a topic area or subject matter; uncovering themes and trends using words instead of statistics (Patten, 2005). The sources were purposively selected to help the author gain understanding of the airport security measures implemented as a result of the 9/11 terrorist attacks on the United States.

Content analysis, as defined by Babbie (2004), “is the study of recorded human communications” (p. 314), such as: Books, web sites, speeches, letters, newspapers, magazines, journals, laws, and constitutions, as well as any components or collections

thereof. Weber (1990) contends that there are three advantages to a content analysis methodology:

1. Communication is a central aspect of social interaction. Content analysis procedures operate directly on text or transcripts of human communication.
2. Documents of various kinds exist over long periods of time. Culture indicators generated from such series of documents constitute reliable data that may span even centuries.
3. Content analysis usually yields unobtrusive measures in which neither the sender nor the receiver of the message is aware that it is being analyzed. Therefore, there is little danger that the art of measurement itself will act as a force for change that confounds the data (p. 10).

The author utilized purposive sampling, which, according to Babbie (2004), is a type of non-probability sampling in which the units to be studied are selected based on the researcher's own judgment about which ones will be most useful or representative.

In keeping with the theme of the study, the author researched two key variables: CPTED techniques and airport security enhancements post 9/11. In addition, the scope of the study was limited to the years between 2001 and 2007. In sampling communication sources, documents, and text within documents, the author searched terms such as: FBI, TSA, airport security, airspace closure, Homeland Security, airport screening, CPTED strategies, terrorism, 9/11, United States response to 9/11, Federal Air Marshals, FAA, airport security laws, and aviation security.

The study also relied on literature and documents made available through databases such as ProQuest, LexisNexis, Criminal Justice Abstracts, Ayer Directory of Publications, Gale Directory of Publications and Broadcast Media, JSTOR, OneSearch, Academic Search Premier, WorldCat, Library of Congress, Newspaper Source, and News Collection. The World Wide Web was also scoured to locate sources from

government agencies including, but not limited to: The White House, Department of Homeland Security, FBI, Transportation Security Administration, and the Department of Defense. Likewise, the author utilized the internet to locate news articles from such sources as: CNN, The New York Times, Fox News, BBC World News, USA Today, ABC News, and U. S. News, among others.

The author selected sources that met the criteria of including the above mentioned search terms and continued to augment the initial number of sources until such time as the new sources reached the point of redundancy, that is, the newly added material did not contribute information or insights beyond those already obtained from previously gathered sources. from the above mentioned sources facilitated this qualitative study into CPTED and Homeland Security.

Institutional Review Board

As the nature of this study is a content analysis of existing documents and literature, and does not involve the participation of research subjects, it qualifies for exemption under UTA IRB guidelines. Following IRB procedure, an application for exemption was filed and granted for protocol 06.274e, CPTED: Interpreting Contemporary Security Practices in the Era of Homeland Security.

CHAPTER 4

FINDINGS

“Terrorists today can strike at any place, at any time, and with virtually any weapon. This is a permanent condition and these new threats require our country to design a new homeland security structure.”
Simonsen & Spindlove, 2004

The purpose of this study was to examine components of Homeland Security’s domestic response to terrorism, specifically the airport security measures implemented as a result of the 9/11 attacks, and demonstrate that they are, in fact, components of the crime prevention through environmental design general theorem. In chapter four, therefore, the author identifies security measures instituted in the aviation arena, post 9/11, as new homeland security techniques that make use of the CPTED concepts of surveillance and access control.

As stated in chapter two, CPTED is based on the premise that the proper design of the environment can reduce the incidents of crime. These techniques are a basic and common-sensical approach to crime prevention (Clarke, 2000). It is only by examining and acknowledging the use of, and success of, CPTED strategies historically, that the strategies can be effectively applied (del Carmen & Robinson, 2000).

CPTED is aimed at preventing the occurrence of criminal acts before they take place utilizing direct controls of the physical environment, or, those measures that directly relate to the prevention of the criminal act (Jeffery, 1977). As will become

clear, the Department of Homeland Security and the Transportation Security Administration utilize the CPTED techniques of surveillance and access control under the guise of homeland and aviation security.

As discussed in chapter two, natural surveillance is the concept of keeping all areas of a space easily observable by people engaged in normal activities. Besides the cameras and monitors that one may associate with surveillance, this translates into the presence of capable guardians, those that act in an official capacity, as well as the presence of normal users of space that are aware of their surroundings. Access control is the practice of controlling the flow of or limiting access to sensitive areas thereby decreasing criminal opportunity by denying access to potential targets. Access control techniques frequently make use of target-hardening structural elements such as physical barriers, entrances, exits, fences, or locks, again, with the aim of denying access to restricted or sensitive areas. Barriers are the most commonly used instrument in access control as they serve to protect areas of vulnerability. The following cases identify specific instances when the CPTED concepts of surveillance and access control have been used as techniques to improve aviation security.

CASE ONE

The Transportation Security Administration (TSA) was created as part of the Homeland Security initiative and made possible through the Aviation and Transportation Security Act, enacted on November 19, 2001 (Costello, 2005). The main responsibility of the TSA is to provide security for all modes of transportation and provide oversight to all companies charged with airport security (del Carmen, 2003).

Prior to the creation of the TSA, security responsibilities were in the hands of the airlines and they often contracted the responsibility out to third parties (U.S. Congress. Senate. Committee on Commerce, Science, and Transportation, 2001). However, this practice led to dangerous hiring practices and other irregularities throughout United States' airports, such as ("National Strategy," 2007): Employees unable to pass a skills test required for employment; employees that had criminal records disqualifying them from employment as screeners; and employees that were foreign nationals not authorized to work in the United States; allowing potentially harmful or pointed objects to be carried on-board planes; and lack of adequate response measures when a breach of security did take place ("National Strategy," 2007). The TSA is not only charged with the oversight of all airport security, they are also "expected to develop consistency and uniformity in the security standards implemented throughout United States' airports" (del Carmen, 2003, p. 16).

The people that are employed by the TSA are an important factor in the overall security strategy of the Agency ("Aviation," 2007). With the previous irregularities in mind, the TSA created new entry-level standards (tsa.gov) for the security screeners they employ. New requirements include (tsa.gov): Applicants must be United States citizens; speak and write English proficiently; hold forty hours of screening instruction, and possess a high school diploma or equivalent work experience. In addition to these minimum requirements, screeners now undergo continuous on the job training to routinely test their abilities to detect weapons and explosive devices by x-ray (tsa.gov). The TSA utilizes a threat image projection (TIP) software program that will randomly

project images of potential threat objects within carry-on baggage so the security officers remain focused and attentive (tsa.gov). This program also allows the screeners' performance to be tested and evaluated, helping to ensure that the most capable employees are the ones screening the baggage (tsa.gov).

CASE TWO

Capable guardians are vital to successful surveillance. The TSA screeners and airport security personnel may be the most visible but they are not the only group responsible for surveying aviation activities (tsa.gov). The Federal Air Marshal Program that began in 1968 as the Federal Aviation Administration's Sky Marshal Program (tsa.gov) was expanded after the 9/11 terrorist attacks in order to place more federal law enforcement officers aboard both domestic and international flights (U.S. Congress. Senate. Committee on Governmental Affairs, 2001). The possibility that these highly trained officers may be present on any given flight works to deter potential hostile acts toward air carriers, airports, passengers, and crews (U.S. Congress. Senate. Committee on Governmental Affairs, 2001). There has also been an increase in the number of uniformed and plainclothes security personnel that patrol the nation's airports (U.S. Congress. Senate. Committee on Governmental Affairs, 2001) subsequently increasing surveillance and presence of capable guardians. Law enforcement officers and more than 6,000 National Guardsmen (U.S. Congress. Senate. Committee on Commerce, Science, and Transportation, 2001) have been deployed to provide greater deterrence, surveillance, and response in the event of an emergency.

CASE THREE

The horrific events of 9/11 demonstrated the need for additional in-flight protective measures against terrorists or other hostile action. Realizing this need, the TSA office of law enforcement has implemented a revised Crew Member Self Defense Training Program (CMSDT) (U.S. Congress. Senate. Committee on Governmental Affairs, 2001). This program is available to both the flight and cabin crewmembers and combines learning technologies with hands-on instruction to train crewmembers how to appropriately and safely respond to hostile acts in the air (tsa.gov). As was also made clear on 9/11, passengers and crew are an instrumental part of aviation security (tsa.gov). It was the people aboard United Airlines flight 93 that became the last line of defense, preventing the terrorists from reaching their target (U.S. Congress. Senate. Committee on Governmental Affairs, 2001).

CASE FOUR

National Explosives Detection Canine Teams combine specifically bred and trained dogs with law enforcement officers to create highly effective and mobile teams to serve on the front line of America's war on terror (tsa.gov). These teams of dogs and handlers are trained to work as effective units to search for a wide variety of dangerous materials that may pose a threat to transportation systems throughout the United States (tsa.gov). The dogs are trained search techniques so that they can quickly locate dangerous materials that may be present in aircraft, unattended packages, baggage, vehicles, or structures (tsa.gov). Likewise, the dogs can just as quickly rule out the presence of dangerous materials allowing for valuable time and resources to be utilized

elsewhere (tsa.gov). These National Explosives Detection Canine Teams are the most mobile form of explosive detection and, therefore, can be utilized in a variety of situations in all areas of the airport environment (tsa.gov). Their presence is an important tool in surveillance and deterrence.

CASE FIVE

An ideal example of the CPTED technique of access control being utilized to secure the homeland occurred on September 11, 2001. At approximately 9:17 am (EST), in accordance with policies and procedures already in place for responding to terrorist incidents, the Federal Aviation Administration (FAA) closed all New York City area airports (del Carmen, 2003). Approximately 20 minutes later, the FAA extended the closures to include all United States airspace (Costello, 2005). Historically, this was the first time that all commercial air traffic was completely halted in the United States (del Carmen, 2003). This access control techniques served purposeful in that it thwarted additional attacks planned for that day (del Carmen, 2003).

CASE SIX

The second example of access control is found in the heightened security screening processes of passengers and baggage. In the post 9/11 era, the TSA is responsible for screening one hundred percent of all passengers, crew, checked luggage, and carry-on items (U.S. Congress. Senate. Committee on Governmental Affairs, 2001). They rely on various technologies to complete this task, such as metal detectors, explosive detection system (EDS) machines, explosives trace detection (ETD), x-ray

equipment, and explosive trace portals (puffers) (tsa.gov). EDS machines utilize technology similar to that of the medical CAT scan to analyze each checked bag or item to detect the presence of weapons or explosives (tsa.gov). If a potential threat is detected, the machines alert security officers who then manage the situation accordingly (tsa.gov).

ETD equipment is much smaller than the EDS machines and is portable enough to be carried easily (tsa.gov) throughout the airport by security personnel. Screeners swab luggage or carry-on items then utilize the ETD equipment to analyze the swab for trace amounts of explosive materials (tsa.gov).

Much like the ETD swab that checks for explosives on luggage, explosive trace portals (puffers) utilize innovative technology to screen passengers for explosives (tsa.gov). To augment the security of checkpoint metal detectors and x-ray machines (tsa.gov), puffers blow small ‘puffs’ of air on travelers which is then quickly analyzed for trace amounts of explosives (tsa.gov).

If any one of these systems detects a potentially harmful item or substance, security personnel is alerted and either the traveler or bag will be subject to additional screening measures or denied access to the terminal or plane (tsa.gov).

CASE SEVEN

The nature of the attacks on 9/11 led security experts to evaluate the accessibility of all areas of the aviation environment (U.S. Congress. Senate. Committee on Governmental Affairs, 2001), including the cockpit area on commercial aircraft. To enhance the safety and security of the flight crew, the government ordered that the

cockpit doors on all commercial planes be fortified with bars and locks to provide a stronger barrier and prevent unauthorized access (U.S. Congress. Senate. Committee on Governmental Affairs, 2001).

Similarly, access points to secured areas around and within the airport structure were reduced to an operational minimum (U.S. Congress. Senate. Committee on Governmental Affairs, 2001). Keypads requiring a personal identification number or magnetic swipe of a key card were installed at previously unprotected access points (tsa.gov). Also, uses of biometric technologies, such as fingerprint or retinal scans, have been employed to limit access to sensitive or vulnerable areas throughout the airport (U.S. Congress. Senate. Committee on Governmental Affairs, 2001). Perhaps the initiative with the largest impact to the traveling public was the policy change regarding gate access (tsa.gov). Since the 9/11 attacks, only authorized personnel and ticketed passengers with identification matching the boarding pass are allowed to proceed through the security checkpoint to the gates and boarding areas (U.S. Congress. Senate. Committee on Governmental Affairs, 2001).

As has been demonstrated, Homeland Security is utilizing CPTED techniques in its aim to better secure the Nation's airports. However, until these techniques are recognized as elements of crime prevention through environmental design, Homeland Security will not benefit from past successes and failures of CPTED applications. The key to a complete and successful prevention strategy must utilize the CPTED techniques as part of a whole, not independent elements. Homeland Security must

embrace the overlapping and complimentary philosophies of CPTED to benefit from the complete crime prevention strategy it offers.

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

“When terrorists attack an American Airliner, they are attacking the United States. They have so little respect for our values – so little regard for human life or the principles of justice that are the foundation of American society.”
The Gore Commission, 1997

The purpose of this study was to examine components of Homeland Security’s domestic response to terrorism, specifically the airport security measures implemented as a result of the 9/11 attacks, and demonstrate that they are, in fact, components of the crime prevention through environmental design general theorem. As the author demonstrates in chapter four, there are numerous instances in which Homeland Security techniques can be identified as one of the principle CPTED philosophies.

This research was relevant because of the existing lapse in the body of knowledge regarding the application of CPTED techniques within United States Homeland Security polices and procedures. There has been little or no research conducted on how Homeland Security might better serve the public if these techniques were identified as part of the CPTED general theorem, working together to create an overall crime prevention strategy. The key to complete and successful prevention is utilizing the CPTED techniques as part of a whole, not independent actions as is currently the case.

The qualitative method and content analysis utilized were appropriate because it was important that the author develop an understanding of the themes and trends being utilized by the Department of Homeland Security in the area of airport security post 9/11. Also, the qualitative analysis facilitated a look at the important role that history plays in the shaping of contemporary policies and procedures. If society does not look at history in its quest for knowledge, then there can be no growth, nor lessons learned from past successes and failures. Examining history is also an important exercise because many of the issues that face society in the twenty-first century have also been cause for concern in the past. Major Arthur Griffith stated in 1898, “Murderous organizations have increased in size and scope; they are more daring; they are served by the more terrible weapons offered by modern science; and the world is nowadays threatened by new forces which, if left unchained, may some day wreak universal destruction” (Greenberg, 2003, p.1). This statement is as true in the twenty-first century as it was in the nineteenth century.

An unmistakable example of how reflecting on the past may have prevented the 9/11 terrorist attacks can be found in the 1974 plot to assassinate President Richard M. Nixon. A lone assassin, Samuel Byck, plotted to kill President Nixon by hijacking a commercial airliner from the Baltimore-Washington International Airport and flying it into the White House. Byck’s plan was thwarted before the Delta DC-9 left the gate but not before he shot two pilots, killing one and wounding the other. Byck was shot and wounded by police during the attempted hijacking and ultimately took his own life. However, the fact remains that Byck was able to access the flight deck of the Delta

airliner. Despite this attempted hijacking, there were no apparent efforts made to increase the security of or decrease the accessibility to the cockpit of United States commercial airliners. Samuel Byck's plan, and attempt, to use a commercial airliner as a guided missile to assassinate the President and destroy the White House should have been a warning to the Government and steps should have been taken at that time to secure cockpits on commercial aircraft. Albeit a very different outcome, Byck's plot was a precursor for the horrific events of 9/11, events that could have possibly been prevented if the Government had thoroughly examined past aviation security breaches and taken steps to eliminate vulnerabilities.

Another example of how reflecting on the past may have prevented the 9/11 terrorist attacks can be found in literature on aviation history. A Commission on Aviation Safety and Security was established by the Bush Administration in 1990. The Commission identified several problems within United States airport security policy and procedure systems and subsequently made numerous recommendations addressing the issues.

Six years later, the White House Commission on Aviation Safety and Security (The Gore Commission) was organized by the Clinton administration in August 1996. The Gore Commission spent six months investigating several areas within the aviation industry before it compiled a set of recommendations which were believed necessary to enhance and ensure the continued safety and security of the nation's air transportation system. Among those recommendations (Patankar & Holscher, 2000):

- The Federal government should consider aviation security to be a national security issue and provide funding for capital improvements.

- The FAA should work with airlines and airport consortia to ensure that all passengers are positively identified and complete security procedures before they board aircraft.
- The FAA should establish consortia at all commercial airports to implement enhancements in aviation safety and security.
- The FAA should complement technology with automated passenger profiling
- The FAA should certify screening companies and improve screener performance.

More than ten years prior to the 9/11 terrorist attacks, recommendations on improving aviation security were made to the federal government, recommendations that were reiterated by the 1996 Commission. Yet, despite the redundant findings and recommendations for improving the system, changes were not made. As a result, the 9/11 terrorists exploited the weaknesses in the United States airport security system, weaknesses that the federal government was aware of yet failed to correct. Perhaps, if acted upon, the security enhancements recommended by the Commissions would have prevented the terrorists from succeeding that September day.

Capable guardians are an essential element in airport and aviation security as well as a fundamental component of CPTED. While the presence of security personnel is a viable deterrent and effective in preventing crime, the airport environment presents unique challenges due to the volume of people using them as well as the threat of those who may attempt to breach the security for nefarious purposes. It is, therefore, inadequate to simply increase the number of security personnel at the Nation's airports. Those charged with security must be qualified to recognize a possible threat and prepared to respond appropriately.

While the security personnel that make up the Transportation Security Administration may be better qualified to deal with the threat of terrorism than their predecessors, the author finds that the requirements for employment are still seriously lacking. For example, the forty hours of mandatory training required for employment was actually mandated by Congress in 2000. It would seem, then, that either the training had not been implemented by September 11, 2001, or it was inadequate at best. Therefore, the author recommends that the number of training hours required for continued employment of all airport security employees be increased to 120 hours of instruction and practical experience to be divided among the following areas:

1. Twenty-five hours of instruction on the psychology of crime and terrorism;
2. Twenty-five hours of instruction on successful observation techniques and reading body language and fifteen hours of field application;
3. Thirty hours of instruction and field application on utilizing surveillance equipment and understanding and interpreting the images, readings, or results;
4. Fifteen hours of instruction on the philosophy of CPTED and their role in its success;
5. Ten hours of instruction on critical thinking and threat analysis.

Likewise, the author finds the requirement of a high school diploma or equivalent work experience for security personnel to be inadequate considering the importance of the job function and high cost of failure. Therefore, the author recommends that all TSA screeners and security personnel be required to have at a minimum sixty hours of post-secondary education. These additional training and educational requirements would help to ensure that those on the front lines of airport security have a better knowledge of that which they protect and that they will be more able to adapt to an environment of changing needs and threats.

Additionally, the author recommends: Educational campaigns geared toward legislators so that they can understand the concept and principles of CPTED which would enable them to enact laws to facilitate the success of the CPTED strategy; and campaigns to educate and inform the public about security related matters so that they understand why security techniques are in place and how they can be a part of the system success.

The paradigm has shifted from ‘if there is a terrorist attack to when and where will the next attack occur’ (McCamey, 2001). As Costello (2005) points out, “If aviation cannot be made secure, homeland security itself will fail” (p. 234). It is, therefore, only by examining and acknowledging the use of, and success of, CPTED strategies historically, that the strategies can be effectively applied to the Nation’s aviation system.

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