

**U.S. CITIES:
TRENDS OF TERRORISM AND POPULATION**

by

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ABSTRACT

Terrorism is a growing concern of the 21st century but is it an increasing phenomenon? This study examines the trends in frequency of terrorism events throughout the United States from 1999-2011 compiled in the Global Terrorism Database (GTD). Drawing on 2000 and 2010 decennial census data and using previous methods from criminology and homicide literature, this research will determine whether certain city-level structural variables are correlated with higher frequencies of terrorism events. This unique approach to analyzing terrorism events introduced a new perspective and found correlations related to criminological literature.

Chapter 1

INTRODUCTION

The Pew Research Center has found that 75% of Americans expect occasional terrorism events to become part of the nation's future (Drake 2013). Consequently, in the 2012 fiscal year alone, the United States government spent a total of \$16.6 billion dollars on counter-terrorism efforts (Desilver 2013). Although terrorism is a major concern for Americans in the twenty-first century, the scope and focus may be distorted (Kurzman 2014; Kurzman and Schanzer 2015). As technology has drastically improved in the past few decades, so has the speed that news travels. As a result, how terrorism events are presented to the public by the media greatly affects people's perceptions of these events (Hoffman 2006). While terrorism encompasses a wide array of tactics, targets, and perpetrators, certain types of events receive more media coverage than others. Misconstrued information can impact the public's perceptions of terrorism and lead people to lobby for policies that do not target the types of events that are most common, but rather the types of events that they fear most. As a result, ineffective policies are enacted influenced misunderstandings perpetuated by the media rather than empirical evidence.

The general trend of terrorism in the U.S. from 1989 to 2015 shows an overall decline in frequency of events, after peaking in 1995, which is illustrated in Figure 1 below. However, in recent years (2012-Present), there appears to have been an increase in the frequency of terrorism events which makes further analysis of the overall trend imperative. This study takes a new approach to analyzing terrorism

trends by considering the effects of city-level structural variables drawn from criminological and homicide literature to determine whether there are any similarities in crime and terrorism correlations. It also looks to answer how frequencies of terrorism events differ in smaller versus larger cities. The goal of the first part of the analysis is to determine which city-level structural variables are correlated with higher frequencies of terrorism events at fixed points in time. The 2000 decennial Census represents a pre-9/11 analysis, while the 2010 decennial Census constitutes a post-9/11 analysis. The goal of the second part of this research is to understand the changes in the city-level structural variables over time and determine whether those changes correlate with higher frequencies of terrorism..

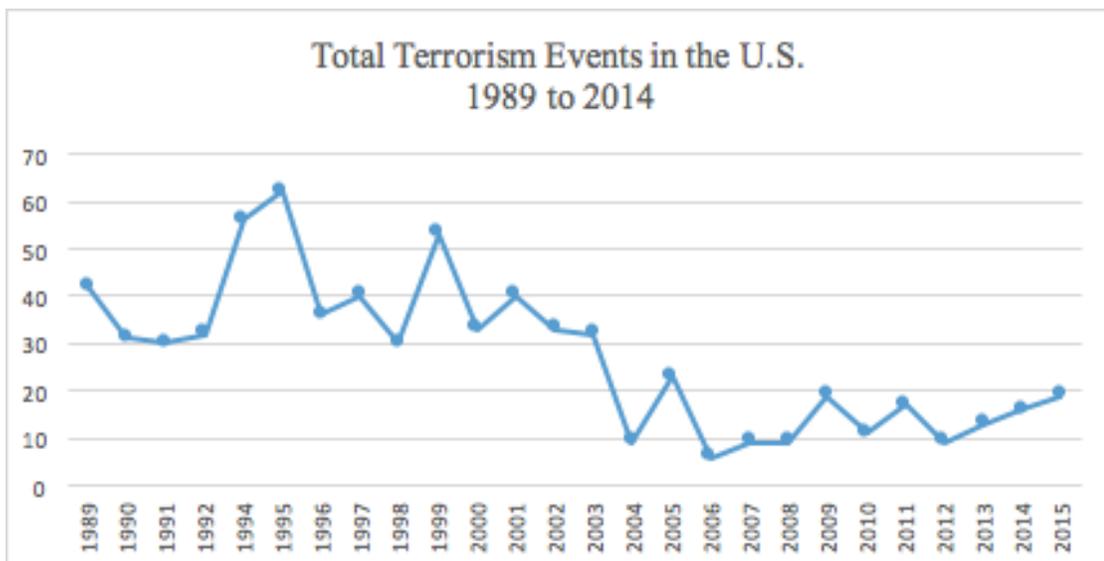


Figure 1 Total Terrorism Events in the U.S. from 1989 to 2015.

Totals are summations of all events in the U.S. as stipulated by the Global Terrorism Database (GTD). The GTD does not include data for 1993.

Chapter 2

LITERATURE REVIEW

There is no single definition of terrorism. Some common components of terrorism definitions are political motivation and the belief that these motives supersede all laws. Terrorism events do not include acts of warfare (Amos and Stolfi 1982, Jenkins 1982), yet conceptualizing the vast scope of possible targets and attacks makes response difficult (Jenkins 1982, Waugh 2006). Since this thesis will analyze events from the University of Maryland's National Consortium for the Study of Terrorism and Responses to Terrorism (START 2016a), I will be using their criteria for inclusion in the data set as the basis for operationalizing terrorism events.

The GTD [Global Terrorism Database] defines a terrorist attack as the threatened or actual use of illegal force and violence by a non-state actor to attain a political, economic, religious, or social goal through fear, coercion, or intimidation (START 2016a).

Due to variability of terrorism events, START assesses three attributes of an event to determine if it qualifies as an act of terrorism.

The incident must be intentional... The incident must entail some level of violence or immediate threat of violence... The perpetrators of the incidents must be sub-national actors (START 2016a).

Narrowing the broad definition of terrorism to that of the GTD provides a framework for defining terrorism events.

The GTD is one of the most widely used data sources for quantitative studies on terrorism. Its long history and global coverage make this one of the most expansive data sets available (Danzell, Yeh, and Pfanenstiel 2016). LaFree and Freilich (2012)

argue that criminology has not been on the cutting edge of terrorism research. They assert that the use of criminological perspectives, theories, and methods will offer fresh perspectives on terrorism issues and recommend the use of global databases like the GTD as a way to

reinvigorate international and comparative criminology (LaFree and Freilich 2012:5). Within that special issue of the *Journal of Quantitative Criminology*, seven of the eight articles published employed the GTD for at least part of their analysis. There is considerable variability in articles analyzing the GTD. Studies range from broad analyses of spatial and temporal patterns (LaFree, Dugan, Xie, and Singh 2012) to an analysis of Far-Right extremists and selection biases that exist in open source terrorism databases (Chermak, Freilich, Parkin, Lynch 2012).

Kis-Katos, Liebert, and Schulze (2010) use the GTD to analyze determinants of domestic and international terrorism. They found that weak or failing countries were hotbeds for terrorist activity and that domestic and international terrorism were determined by similar forces (Kis-Katos et al. 2010). The GTD has presented an opportunity to study a vast number of terrorism issues. This research looks to contribute to the field by answering the call for new applications of criminological theories and methods to terrorism topics.

Perceptions of Terrorism and US National Security

In general discussions of U.S. terrorism, great emphasis is placed on Islamic extremists and international threats (Kurzman, Schanzer, and Moosa 2011; Kurzman 2014). The rhetoric surrounding national security frequently claims that immigrants and refugees, particularly, are a major threat (Makholouf 1996). However, recent research shows that non-jihadist, domestic terrorism is a far more common threat to national security. Between 1980 and 2005, the FBI found that Muslims committed

only 6% of terrorist attacks in the United States (U.S. Department of Justice 2010). Analyzing U.S. terrorism events since 9/11, Kurzman found that 37 Americans lives were lost in Muslim-linked attacks. To put that number into perspective, he compared that to the more than 190,000 Americans murdered in that same timeframe (Kurzman 2014). In 2015, New America, a Washington based research center, similarly found that jihadist terrorists were accountable for 26 American deaths since 9/11, while right-wing attacks by

white supremacists and people motivated by racial and religious hatred and anti-government views” (New America 2015) were responsible for 48 deaths, almost twice as many (Nakashima 2015; New America 2015)¹.

The scope of this research is in a state of continuous flux due to the most recent global acts of terrorism. In the time since these articles were published, the U.S. endured the Pulse night club shooting in Orlando, Florida on June 16, 2016, where 49 people were killed and 58 more were injured (CNN 2016) This attack brought the death toll to 94 Americans killed by perpetrators claiming connections to jihadists, since the attacks of 9/11 (New America 2016). It is important to highlight that every lethal jihadist attack in the United States since 9/11 was perpetrated by a citizen or permanent resident, none of whom were refugees. Jihadist attacks still only comprise a small percentage of all U.S. terrorism events (New America 2016). Cesari also argues that the risk of radicalism is an overrated threat. The difficult political and social situations for Muslim Americans are likely to add to preexisting sentiments of

¹ The discrepancy between the two different casualty rates is due to one series of events, the 2002 Beltway Sniper accounts for all 11 fatalities. This difference in datasets highlights the variability of the definition of terrorism and its effects on the inclusion of events. Kurzman included the 11 fatalities of the Beltway Sniper and New America did not.

alienation (Cesari 2011). Several previous qualitative studies have identified discrimination as a factor fueling radicalization and terrorism campaigns (Bradley 2006, Laqueur 1999). Danzell, Yeh, and Pfannenstiel (2016) found that terrorism was most likely to emerge in countries with high ethnic polarization and economic difficulties. Although this study does not capture measures related to discrimination, these previous findings will help to contextualize the results.

Certain terrorism events receive far more media attention than others, especially those perpetrated by people claiming affiliation with radical Islamic ideologies, resulting in skewed public perceptions (Kurzman et. al 2011; Kurzman 2014; New America 2016). These skewed perceptions are most evident in the National Security Strategy (NSS) reports released by the White House each year beginning in 1986 (Doyle 2007). In the 2015 NSS report, the only two terrorist organizations mentioned by name were al-Qa'ida and Islamic State of Iraq and the Levant (ISIL). Far more emphasis was placed on protecting the country from transnational terrorism than homegrown or domestic terrorism, which were briefly mentioned once. The U.S. government focuses the majority of its resources on protecting its citizens from international, transnational, and jihadist related terrorism events (Kurzman 2014).

The United States Government, the media, and the American public's anxiety of terrorism is focused too narrowly on transnational and Islamic extremist terrorist events (Kurzman 2014; Kurzman and Schanzer 2015). Perhaps this focus has prevented more attacks than can be accounted for in the GTD. If this is the case, and counterterrorism efforts are effective transnationally, then still more resources could be allocated to combat domestic counterterrorism. If it is determined that the majority of events that were perpetrated in the U.S. between 1999 and 2015 were homegrown

terrorism, then greater focus needs to be allocated towards preventing domestic terrorism. Perpetuating false assumptions and perceptions of terrorism by exaggerating the actual threat of transnational terrorism will cause the U.S. to create policy and continue to stimulate government spending without addressing the root causes of what may be the majority of terrorism events in the U.S. While it is important to vigilantly watch and protect the American people from international threats, there may actually be more domestic events receiving less concentrated attention. With so much focus on Muslim-related terrorism, both by the media and the U.S. government, the American people may be less aware of more common terrorist threats.

“New” vs “Old” Terrorism

Innovations in technology have not only changed the way the public receives and digests information, but they have also affected the way in which terrorist organizations communicate and recruit members. These innovations and increased access to technology have changed the spread of information and how extremist organizations promote agendas (Hoffman 2006; Stern and Berger 2015). The Internet provided speed and global reach by facilitating transnational contacts that were never accessible before (Newmann 2009). Extremists and terrorists follow the same technological trends as the rest of the world, adopting social media as another way to spread propaganda virtually cost-free. From the beginnings of social media in the forms of chatrooms, forums, and blogs to the current use of Facebook, Twitter, and YouTube, social networking tools have been commonly used to spread extremist messages and to recruit members (Stern and Berger 2015). The Internet created a new and more effective platform for leaderless resistance movements, but these types of movements are far from new. Snowden cited the Aryan Nation and the KKK as groups

that popularized this tactic (2005). These leaderless movements allowed the well-known sponsors to disassociate themselves from the most violent actors even though both parties support the same goals. Leaderless resistance movements have also been employed by political protest movements but in terms of terrorism, Snowden argues that the use of these tactics is rare (2005).

Previous generations of terrorists followed classic cellular structure, with a hierarchical basis. Hoffman described ‘traditional’ terrorist groups, particularly of the 1970’s and 80’s, as interested in publicity rather than death and destruction. “Old” terrorists attracted supporters and drew attention to their cause, because they

themselves believed that only if their violence was calculated or regulated would they be able to obtain the popular support or international recognition they craved (2006: 269).

Hoffman then cited a new generation of terrorists who are

less cohesive organizational entities (2006: 271).

Intentional diffused organizational structure led to greater independence in tactical decisions and more indiscriminate casualties due to a lack of publicly identified central command. In summary, Hoffman contended that a new form of terrorism emerged, adding to debate between ‘new’ versus ‘old’ terrorism. In opposition to Hoffman, Crenshaw argued that these loose connections and decentralized organizational structures were common even for previous generations of terrorists and that the processes of radicalization are generic (Crenshaw 2011:62).

Aligned with Crenshaw, Snowden argues that the term “new terrorism” is often used interchangeably with the concept of leaderless resistance movements (2005). The “new” terrorism rhetoric propagates the myth of lone wolf terrorist, violent actors

whose only goal is to generate chaos through death and destruction. Snowden argues that

almost all events are connected with a particular cause or causes, and events not attributed to specific groups tend to have minimal injuries and deaths compared to those directly traced to particular groups (2005: 332).

Understanding the debate surrounding “new” versus “old” terrorism helps to bring context to the analysis of the trends of terrorism in the past several decades which will help to determine future trajectories for U.S. national security.

Demographic Shifts and Conflicts

There are two competing schools of thought in the demographic shifts and conflict literature. The first is a body of literature that contends that large demographic shifts cause violent conflict.

Unequal population growth rates between different ethnic groups... do appear to increase the risks of violent internal political and ethnic conflicts. (Goldstone 2002: 5).

Other research shows that larger populations may need more regulation due to the higher likelihood of conflicts between ethnic groups over political power struggles (Poe and Tate 1994; Sambanis 2001; and Goldstone 2002). Mathews extends this argument by explaining that U.S. national security would have to broaden its considerations to include conflicts resulting from demographic changes (1993). Rapid population change may contribute directly to war due to an imbalance of population power. War may be an extreme example of the outcome of violent conflict, but arguably, demographic power should be considered (Thayer 2009). Considering population changes over time through employment of decennial census data will allow

for an analysis of the relationship between demographic shifts and violent conflict in the form of terrorism.

In opposition to the previously cited research, another body of literature found that changes in population characteristics had no significant effects on rates of violent conflict (Beck, Katz, and Tucker 1998; Beck 2001). Analyzing U.S. terrorism events, using U.S. Census data to track major population changes over time, will provide insight into the connections and relationships between demographic shifts and violent conflicts. As the U.S. population continues to diversify, it is imperative to test for correlations between structural city-level variables and terrorism trends to expand the discussion and determine if terrorism is influenced by demographic shifts such as influxes of immigrants and refugees. The results of this analysis may have important immigration policy implications. The literature documenting demographic shifts and conflict evolved to focus on migration and terrorism. More of the recent work is concentrated in the migration and terrorism literature.

Migration and Terrorism

Current rhetoric surrounding immigration and the refugee crisis associates immigrants with rises in violent crime. Global public opinion has influenced U.S. foreign policy and national security (Farwell 2012). Many perceive that immigrants, particularly refugees, may put the U.S. at greater risk of terrorism (Humphrey 2002; Cohen 2002; Milton, Spencer, Findley 2013). Milton et. al found that refugee flows increased the frequency of transnational terrorism events (2013).

While the 'refugee' is a non-racial category, in practice it refers to unwanted refugees largely from the Middle East, especially Afghanistan and Iraq (Humphrey 2002: 120).

Establishing global immigration policies and greater security measures for transnational borders has criminalized refugees and redefined global citizenship (Humphrey 2002). The stigma of refugees long predates the events of 9/11, falsely linking them to violence and terrorism as far back as the 1970's and Vietnam conflict (Cohen 2002).

The presence of immigrant communities has long been associated with higher rates of crime, fueling anti-immigration policies (Martinez and Lee 2000; Mears 2001; Wadsworth 2010). Shaw and McKay (1942) claimed that ethnic heterogeneity, the increased interactions between different cultures due to larger populations of immigrants, weakened community organizations and caused higher crime rates. However, other scholars determined that immigrant communities have been associated with lower crime rates (Bernard 1967; Wadsworth 2010). By studying how patterns of immigration to cities with populations of 50,000 or more people related to rates of homicide and robberies in addition to how the changes in population sizes of immigrant communities related to violent crime rates, Wadsworth found that immigration might be, in part, responsible for the 1990's crime drop. Cities with the largest increases in immigrant populations between 1990 and 2000 experienced the greatest decreases in violent crime (Wadsworth 2010). Measures of foreign born populations can be derived from the U.S. Census. These measures can then be used to test the correlations between foreign born populations and frequency of terrorism events in the U.S.

Risk Perceptions and the Social Amplification of Risk

There are many definitions of risk in the literature, but for the purposes of this study, two of the leading definitions are most relevant. Bremmer and Keat (2009)

define risk by the probability and impact that an event will lead to measurable loss. Giddens (2003) adds that risk is evaluated by an assessment of the future possibility of an event. The construction of risk rests on its relationship to the probability of an event occurring (Altman 2008). Influenced by this probability, government officials and the media shape the public's view of risk. Munson (2008) contends that the goal of all terrorism is to evoke fear in target populations. Therefore the reactions to terrorism attacks are just as critical as the attacks themselves.

The social amplification of risk literature supports Munson's claim. Terrorism is not successful until it inspires fear in a population. Slovic and Weber (2002) argue that overestimates of existing dangers by public officials lead to biases and an increase in public fear. Knowledge of psychological mechanisms that elevate public fear may aid in more effective response and intervention to lessen the impact of acts of terrorism. The social amplification of risk framework (SARF) was developed in the 1980's. Though originally applied to nuclear risks, the application has been expanded to include more recent threats, such as environmental disasters, criminal justice contexts, and terrorism (Slovic and Weber 2002). Effective risk communication has been cited as a solution to the social amplification of risk (Slovic and Weber 2002). Effective risk communication defines the risk adequately while not overwhelming the public.

Post-911, warnings of increased terrorism risk tended to be vague. Modifiers to the risk, such as severe, high, and elevated, were the Department of Homeland Security's Advisory System that described risk without identifying a city or region to which it applied (Woods 2007), as well as a long list of other short-comings (Aguirre 2003). The ineffectiveness of this system led to its replacement in April, 2011 with the

National Terrorism Advisory System (Department of Homeland Security 2017).

Before the 1970's, government policy was to delay sharing incident details that could agitate the public (Bassiouni 1973). In this era before electronic sharing of information was pervasive, Bassiouni contended that the

public can rationally handle the information and effective risk communication should share details of the event in addition to clear advice and instructions for people to follow (Bassiouni 1973: 3).

In this era of instant mobile communication, Bassiouni's advice is one way to combat the detrimental implications of social amplification of risk. Delayed official narratives may invite unnecessary challenges by witness accounts on social media and other immediate information surrounding terrorist attacks. U.S. administration officials have major impacts on the American public's threat perception. With a more transparent stance, government officials work to get ahead of terrorism propaganda and false accounts by presenting official narratives to the public quickly (Nacos, Bloch-Elkon, and Shapiro 2007). Literature on the social amplification of risk provides an important part of the context surrounding U.S. terrorism events and how information is disseminated to the public after an attack.

Homicide and City-level Analyses

A current survey of the literature showed no analysis of U.S. terrorism events using decennial U.S. Census data at the city-level. Due to the rarity of both terrorist events and homicides, I will be drawing on homicide literature for the methodological framework. Connecting criminology literature on homicides with political and disaster literature on terrorism is a unique merging of perspectives. This connection will fill a gap in the literature and provide insight into the trends surrounding terrorism in the U.S.

The criminological literature on homicide and violent crime is focused in large cities (Pratt and Francis 2005). Using city-level structural variables from homicide literature provides the basis for an analysis of terrorism that has never been done before. In the homicide literature, economic deprivation, racial segregation, and inequality have been used as measures of the predictors of homicide rates while controlling for population size and region (Messner 1982; Williams 1984; Parker 2001). High rates of poverty, racial segregation and inequality have been associated with higher rates of homicide (Williams 1984, Parker 2001). These measures will be captured by considering the diversity of each city. Racial and ethnic segregation cannot be analyzed at the city level, but the percentages of the population that identify as Black or Hispanic will be included in the analysis of U.S. terrorism events. These measures are used to capture an idea of the diversity or racial heterogeneity within a city by criminologists (Parker and McCall 1999; Morenoff, Sampson, and Raudenbush 2001, Pratt and Cullen 2005). From these homicide findings, variables capturing economic deprivation and diversity will be included in this analysis. Common variables in the homicide literature that are used to capture economic deprivation include median income, rates of poverty, rates of renter occupied housing, and rates of vacant housing. Diversity will be represented by the percentage of the population that identifies as Black or Hispanic. These variables have all been positively correlated with increased homicide rates in large cities (Pratt and Francis 2005). It is important to distinguish between small and large cities in this analysis given that perceptions of terrorism focus on international events targeting large cities (Kurzman, Schanzer, and Moosa 2011; Kurzman 2014). The analysis of these city-level variables may shed light on the structural relationship between different sized cities and frequency of terrorism

events. With a longer history of analyzing crime and a broader knowledge base, understanding the relationship between the structural variables and terrorism allows for the application of well-established criminological methods and theories to emerging empirical research on terrorism.

Along with these structural variables, changes in population demographics will be measured to test the relationship between major changes in population and violent conflict. Considering variables drawn from the criminological and homicide literature will help determine whether there inherent similarities between the structural relationships of crime and of terrorism or if they are completely distinct. Understanding how population characteristics and their change over time are correlated with frequencies of terrorism events may produce new theories in terrorism research. Any new insights into the trends of terrorism may aid efforts to develop future national security policies.

Hypotheses

Counter to the current rhetoric on terrorism, but aligned with much of the crime and immigration literature, the first hypothesis is that cities with large foreign-born populations will not be correlated with increased terrorism events. The second hypothesis is that cities with high population densities will be correlated with increased terrorism events. The third hypothesis is that the variables that correlate with homicide and violent crime will also correlate with increased frequency of terrorism events in large cities. The fourth hypothesis is that those variables that are significant at fixed points in time will also be significant over time.

Chapter 3

METHODS

Data

Two sources were used for data collection, the START Global Terrorism Database (GTD) and the U.S. Census. The GTD has undergone several data collection phases from 1970 to present, utilizing different institutions over time.² The START team synthesized data from the entire timespan to ensure that it included events that were consistent in terms of definitions and methodologies. Each of these phases of data collection relied on publicly available, unclassified source material, mainly media articles and electronic newspapers. In some cases, existing data or secondary source materials were used (START 2016a). Events included in the GTD categorized attacks that took place in different temporal or spatial settings as separate events. The events of 9/11, for example, represent four events and three cities; two events in New York, one in Washington D.C., and one in Shanksville, PA. Even though the New York events happened in nearly the same spatial location, there was time between the attacks, which was why they were counted separately. From the GTD, U.S. terrorism

² Data collection first began with Pinkerton Global Intelligence Service (PGIS) from 1970-1997. The Center for Terrorism and Intelligence Studies continued this data collection from 1998-2008. The Institute for the Study of Violent Groups (ISVG) headed the data collection from 2008-2011. START took over data collection in November of 2011 and continues to collect the data for the GTD.

events were counted each year, totaling 721 events spanning 385 cities between 1989 and 2015 (START 2016b). After being separated by year and city, these events were isolated in a new data set. The dataset for this analysis only included events from 1999-2014 totaling 342 incidents. Each event in this data set held equal weight. This analysis did not include 2015 or 2016 terrorism events like the shootings in San Bernardino, CA or Orlando, FL.

The GTD not only provided a specific definition of terrorism but also a framework to determine which incidents would be included in the dataset. Events meeting at least one of the following three criteria were included. Criterion 1: Political, economic, religious, or social goal as motivation; criterion 2: Intention to coerce, intimidate or publicize an ideology to larger audience(s); and criterion 3: Outside international humanitarian law which defines warfare (GTD Codebook 2016). Events do not have to be linked to a known extremist group to be included in the database. Given the subjectivity for the inclusionary criteria, the coders also noted if there were any doubts that particular events were actually terror-related. Of the 342 incidents included in this dataset, 72 events (21.6%) were deemed doubtful.³

The database also noted the attack types, if known, for each event. The codebook lists the possible attack types as assassination, armed assault,

³ The doubt variable was not considered before the original analysis. Once it was discovered that such a large percentage of events may have been deemed inconclusively terrorism, steps were taken to determine how much of an influence these events had on the results. A dummy variable representing the doubted events was added to the dataset and found to be significant. However, a model without the doubtful events included was compared to a model with the doubted events included and this comparison showed no change in the coefficients. This showed that the doubtful events did not have a significant influence on the models previously produced.

bombing/explosion, hijacking, kidnapping, barricade (disruption of normal operations and hostage taking), kidnapping (hostage taking, moving and holding for extended period of time), facility/infrastructure attack, unarmed assault, or unknown. Events included may have multiple attack types listed. Cyberattacks are not included in this dataset. Mass shootings, on the other hand, are included if the attack met one of the three criteria in the outlined. The GTD Codebook does not explicitly explain why some mass shootings are included while others are not. Crenshaw explains that to be considered terrorism, a mass shooting needs to be connected to an organized entity or explicit claim (2017). When considering some of the deadliest mass shootings in U.S. history, it would appear that the GTD researchers used the same contributing factors. For example, the Sandy Hook shooting, on December 14, 2012, in Connecticut, where 26 elementary students and staff were killed, was not included in the GTD. The rhetoric surrounding this incident described the shooter as having a history of mental illness (CNN 2016). Comparing Sandy Hook to another mass school shooting, the Columbine High School shooting that took place on April 20, 1999 where 13 people were killed and at least 20 more were injured by two teenagers, was included in the GTD. The perpetrators in this incident had written a manifesto and had also been planning to bomb the school in an attack similar to the Oklahoma City bombing in 1995 (CNN 2016). As a contemporary example, Crenshaw does not classify the recent Las Vegas shooting that took place on October 2, 2017, where a man opened fire on a concert crowd from a hotel window, killing 58 people and injuring 546 more, as a terrorism event. There was no clear motive or link to an organized group and therefore the attack cannot be interpreted as an act of terror (2017).

Census data was downloaded from the U.S. Census Bureau website. For the 2000 data, the decennial census was used, and for the 2010 data, a combination of the decennial census and American Community Survey (ACS) was used. Variables, including poverty and mobility/migration, were only available from the ACS in 2010. The Census Bureau recommended using five-year estimates from the ACS for datasets including large numbers of smaller cities (2017). The 1990 Census data was excluded from the analysis due to lack of accessibility and variable compatibility with the 2000 and 2010 Census data.

The downloaded census data came in multiple data sets categorized by the demographic characteristics included in the measures. These data sets included all cities and Census designated places, and the data was combined using the unique id number given by the census number. Once all of the census data was merged into one file, it was merged with the GTD which included a variable called CityID. The CityID variable was an assigned number for each city in the GTD data. After sorting the merged data by the CityID, all cities that did not have a CityID were deleted from the data set, leaving the 360 cities where terrorism events have taken place between 1999 and 2015. If the event took place in a town or area that was not considered a Census designated place (CDP) or city, the case was dropped. Events had to meet both criteria of being identified in the GTD and taking place in a city recognized by the U.S. Census Bureau. Several events in the GTD were recorded as taking place in areas that could not be included because they were not considered CDPs. Several other cases only listed a county or were in towns, and three events took place in national parks. There were another three cases of CDPs that were not recognized in the 2000 data set

but were considered CDPs in 2010 data, and therefore not included in the change models.

Variables

Dependent variables

The unit of analysis was individual U.S. cities. The dependent variables for the first models were event rates calculated by taking the number of terrorism events a given city has experienced in the 1999 to 2015 timespan collected from the GTD, divided by the population of the city, and multiplied by 100,000. The rates were then averaged for three years around the census years. The 2000 rate was an average of 1999, 2000, and 2001 event rates. The 2010 rate was an average of the 2009, 2010, and 2011 event rates. The second phase of the analysis employed cross-sectional, time-series change models to understand trends in terrorism event frequencies.

Independent variables

The independent variables, mainly based on criminological literature, include measures for population size, percent of the population that identifies as Hispanic, percent renter-occupied housing, percent vacant housing, and median income. Several variables were also included that may have had significance based on the terrorism literature: percent of the population who were foreign born residents, percent of the foreign born residents who were not naturalized U.S. citizens, and population density. In addition, several other demographic measures were included in the models as control variables, including population breakdowns by race, gender, median age, median income, and geographic region.

Analytic strategies

There are two main analytic strategies that were employed to achieve all of the research goals. The first part of the analysis included several different models which used the average terrorism event rates for 2000, allowing for a comparison to the model which used the 2010 average terrorism events rate as the dependent variable. Similar models were compared for the average 2000 fatality count and the average 2010 fatality count.

The second phase of this research employed a pooled time-series, cross-sectional random effects models to understand the variance in the variables correlated with higher rates of terrorism events in each city over time. This helped to answer the questions of which cities were most affected, an analysis of what the trends were for small versus large cities, and finally which cities are showing growth, decline, or stabilized rates of terrorism over time? The size of the events could not be controlled for using measures based on damages as originally intended due to too much missing data from the GTD's damage variable. Instead, fatality counts used to complete a separate analysis allowed for another perspective on the debate of new versus old terrorism. The second analytic strategy used the same population characteristic variables in a change model to understand these trends on a deeper level.

Data analysis began with factor analyses to test for multicollinearity and latent factors between the variables. The factor analyses included only the variables believed to be theoretically most significant to the analysis and those that were often theoretically linked in the literature. The factor analysis for the 2000 data yielded two possible factors considering variables as loading together with factor scores of 0.5 or higher. The first factor expressed what came to be the disorder index variable. Four variables, percent renter-occupied, percent vacant, percent below the poverty line, and

median income loaded together. This was consistent with previous homicide literature which often relates these variables to community disorder and higher crime rates (Parker and Pruitt 2000; Parker 2001). Higher rates of renter-occupied and vacant homes were found to be closely linked to higher rates of poverty and lower median incomes. To calculate the disorder index, each variable was multiplied by its relative factor score before being summed, allowing the index to account for the strength of each variable respectively. The second factor showed that percent Hispanic and percent foreign born were loading together. Percent Hispanic was used as a measure of diversity in the cities, and percent foreign born was incorporated due to the current rhetoric in the terrorism literature. Due to the theoretical differences for including these two variables in the analysis, it was decided to keep these variables separate. The 2010 data set incorporated a second factor analysis. This test found very similar results to that of the 2000 data set. The only difference was that the 2010 factor analysis showed that percent Hispanic loaded in both factors. Due to a distinct theoretical basis and consistency across the years, it was not included in the disorder index variable created from the first factor. Once the factor analyses were completed and the disorder index variables created, a linear regression tested the collinearity of the variables. For the 2000 model, only percent Hispanic had a variance inflation factor (VIF) score above 4. The 2010 model did not have any VIF scores above 4 showing that multicollinearity was not an issue.

Although logistic regression was suggested for rare events analyses (King and Zeng 2001), poisson regressions have been determined to be a better fit based on more current homicide and terrorism literature (Parker 2001, Major 2002, Porter and White 2012). Several tests were used to determine if a poisson would be the best statistical

model for this data. Compared to a zero-inflated poisson model (zip), which accounts for data with excessive cases of zero, a vuong test showed that a poisson model would be better. The results of the poisson model were also compared to a negative binomial model. After running the negative binomial model and considering the post estimation statistics, the log (alpha) test and the Bayesian information criterion (BIC) scores indicated again that the poisson models were more appropriate. Once it was determined that the poisson models were most appropriate, I ran six different models including a 2000 and a 2010 model for all cities, small cities under with a population 100,000 and large cities with a population equal to or greater than 100,000. The determination of large cities with populations over 100,000 was based on homicide and other criminological literature (Messner 1982; Williams 1984; Parker and Pruitt 2000; Parker 2001).

The final part of the analysis employed a pooled-time series, cross sectional random effects model of the change in frequency of terrorism events from 2000 to 2010. Several tests, including the Hausman specification test and postestimation statistics determined that fixed effects and mixed effects models were inappropriate. Below are the results from the poisson and pooled time-series models.

Chapter 4

RESULTS

Below, Table 1 displays a table of the descriptive statistics for the independent variables. Additionally, the third column shows the percent change in means from 2000 to 2010. The formula for this calculation can be found in the note below the table. These descriptive statistics represent the census data for all of the cities which experienced a terrorism event between 1999 and 2013.

Table 1 Descriptive Statistics

	2000 M(SD)	2010 M(SD)	% Change 2000- 2010
% Below Poverty Level	15.04(10.01)	18.33(8.75)	21.88
% Vacant Housing	7.25(6.05)	9.93(6.89)	36.97
% Renter Occupied Housing	15.04(10.01)	42.22(13.94)	180.71
Median Income	41516.78(16081.86)	27095.96(10252.73)	-934.46
% Foreign Born	11.42(11.35)	13.14(11.60)	15.06
% Foreign Born Not Naturalized Citizen	38.71(57.93)	57.11(18.91)	47.53

% Mobility (changed residence in the past 5 years 2000, changed residence in the past 12 months 2010)	0.82(0.043)	32.69(18.39)	3886.58
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Table 1 Continued

	2000 M(SD)	2010 M(SD)	% Change 2000-2010
% Age 15 to 24	15.75(7.15)	15.76(7.40)	0.06
% Black	11.24(15.75)	10.77(14.58)	-0.04
% Latino/Hispanic	15.99(22.86)	19.33(23.255)	20.89
% Male	48.76(2.34)	48.89(1.97)	0.27
Ln of the Population Density	7.79(0.86)	7.75(0.95)	-0.51

Note: Change score: $((t_2-t_1)/(t_1))*100$

A multivariate analysis produced variance inflation factors (VIF) above 4 in both time periods expressing concern for multicollinearity between variables. After creating the disorder indices, the results of the multivariate analyses expressed VIFs of 2 or below, well within the acceptable limits. The results of the factor analyses presented in Table 2 include the results for both 2000 and 2010. The same four variables, median income, vacant housing, renter occupied housing, and below poverty level, loaded together in both time periods. It should be noted that even though the Hispanic and foreign born variables loaded together in a second factor,

those factors do not appear on the table below given that it was theoretically important to keep them as separate variables for the purpose of this study.

Table 2 Factor Analysis: Rotated Component Matrix

	Disorder Index 2000	Disorder Index 2010
Foreign Born		
Foreign Born and Not Naturalized Citizen		
Hispanic		
Population Density		
Median Income	-0.903	-0.866
Vacant Housing	0.545	0.515
Renter Occupied Housing	0.540	0.768
Below Poverty Level	0.856	0.924

Table 3, below, shows the results of all 6 poisson regression models. The table is organized to show the 2000 and the 2010 results side by side for each respective set of small and large cities. The result of hypothesis one was as expected; neither foreign born populations nor foreign born populations who were not naturalized correlated with increased frequency of terrorism events. The second hypothesis, that increased population density would be correlated with increased frequency of events was only significant in the 2000 large cities model. This hypothesis was disproved in all three of

the 2010 models. The third hypothesis was largely disproved; the majority of variables derived from the criminological and homicide literatures were not significant in large cities. Percent mobility, even though the measure changed from 2000 to 2010, remained the most consistently significant variable across the models, particularly in 2010. Some of the most surprising results were for the percent of the population identifying as Black and 15-24 year old variables. For small cities, the percent of Black residents decreased the likelihood of terrorism events in the 2000 model. However, in the 2010 model, the same variable increased the likelihood for terrorism events, in small cities. This measure was not significant when considering all or only large cities. The 15-24 year old variable was significant and positively correlated in 2000 for both the all cities and small cities models. These results were similar to those of the homicide literature, suggesting that criminological theories may be able to explain some trends in terrorism. Surprisingly in 2010, the age variable shifted to negative coefficients for all three models but was only significant in large cities. Significant results for the age variable were not anticipated for either time period. The sex and regional variable results were also unexpected considering they were added to the models as control variables. The percentage of the population that identified as male was only significant in the 2000 large cities model and was negatively correlated with increased frequency of terrorism events. The direction of this correlation is opposite to what would have been expected in criminological literature. The Northeast variable was not significant in either time period for any size city. The regional West variable, however, was significant with positive coefficients in all 3 of the 2000 models but not in the 2010 models.

Table 3 Poisson Regression Coefficients (and robust standard errors) Terrorism Events 3 year Averages

	All Cities 2000	All Cities 2010	Small Cities 2000	Small Cities 2010	Large Cities 2000	Large Cities 2010
<i>Terrorism and Migration</i>						
Foreign Born	-.034(.022)	-.014(.035)	-.029(.032)	-.021(.060)	-.017(.032)	-.014(.034)
Foreign Born and Not Naturalized Citizen	-.002(.009)	.013(.025)	-.003(.004)	.003(.037)	.068(.037)	.005(.032)
Population Density (ln)	-.222(.251)	.199(.468)	-.383(.233)	.742(1.273)	.956(.466)*	.372(.551)
<i>Diversity/Criminology/ Homicide</i>						
Percent Hispanic	-.025(.014)	.004(.019)	-.009(.017)	.019(.029)	-.029(.019)	.006(.019)
Percent Black	-.034(.016)*	.032(.019)	-.056(.021)**	.088(.025)***	-.016(.017)	.007(.025)
Percent 15-24 year olds	7.584(2.142)***	-.106(.058)	5.494(2.751)*	-.065(.064)	5.228(4.170)	-.299(.105)**
Disorder Index	-.000(.000)	-.000(.000)*	-.000(.000)	-.000(.000)*	-.000(.000)	-.000(.105)

Table 3 Continued

	All Cities 2000	All Cities 2010	Small Cities 2000	Small Cities 2010	Large Cities 2000	Large Cities 2010
Percent Mobility	-3.386(2.818)	34.434(6.759)***	-4.044(3.727)	7.81(15.789)***	9.839(4.667)*	154.637(37.346)***
<i>Regional/controls</i>						
Percent Male						
Northeast	-.077(.142)	.052(.143)	.026(.096)	-.005(.181)	-.829(.280)**	.231(.337)
West	.782(.388)*	.362(.667)	.354(.522)*	.443(1.309)	1.846(.562)***	-.297(.738)
Pseudo R²	.1374	.1314	.0883	.2256	.1914	.1926
N	285	202	184	104	101	98

***p<.001

**p<.01

*p<.05

Table 4 shows the results of the pooled-time series, cross sectional random effects poisson regression model. The fourth hypothesis suggested that the same variables that were significant at fixed points in the poisson regression model would also be significant in this model. This hypothesis was also largely disproved. Models were run for the breakdowns of both small and large cities; however, there were no significant results. Additionally, of the two variables significant in the poisson regression model for large cities, population density and mobility, only mobility was significant in this model. Even though the fourth hypothesis was largely disproved, this model appears to explain far more of the trends in terrorism frequencies. Contrary to current pervasive immigration rhetoric, the migration and terrorism literature, and the demographic changes and conflict literature, the variance in the percentage of population that is foreign born was not significant. Additionally, the variance in the percentage of citizens who were not naturalized in the cities from this sample actually had an inverse relationship with increased frequency of terrorism events. Also, challenging the previous demographic changes and conflict literature, the variance in both Hispanic and Black populations was inversely and significantly related to a higher frequency of terrorism events. The variance in the percentage of the population age 15-24 years old was significantly and positively correlated with increased terrorism events, as was the variance in the disorder index and the increased residential mobility. A causal mechanism should not be inferred here as presented in the conflict literature. It is unclear if changes in population are causing an increased frequency of terrorism events or if increased terrorism events are causing populations to migrate and change. The variance in the number of cities in the Northeast region of

the country affected by terrorism events were positively correlated with a higher frequency of events.

Table 4 Pooled-Time Series, Cross sectional Random Effects Model of the Changes in Terrorism Events from 2000 to 2010 (coefficients and robust standard errors)

	All Cities
<i>Terrorism and Migration</i>	
Foreign Born	-.028(.019)
Foreign Born and Not Naturalized Citizen	-.005(.002)*
Population Density (ln)	-.144(.228)
<i>Diversity and Criminology</i>	
Percent Hispanic	-.019(.012)*
Percent Black	-.024(.013)*
<i>Homicide</i>	
Percent 15-24 year olds	.037(.017)**
Disorder Index	-.000(.000)*
Percent Mobility	.018(.006)***
<i>Regional/controls</i>	
Percent Male	-.096(.132)
Northeast	.757(.459)*
West	.450(.326)
Number of Groups	315

Note: Models for both small and large cities were run, but the results were insignificant.

***p<.01

**p<.05

*p<.1

Chapter 5

DISCUSSION

The general trend of terrorism events showed an overall decrease in events from 1989 to 2015 as seen in Figure 1. This analysis of the correlations between structural city-level variables relevant in the criminology and homicide literature, showed that these city-level predictors of violent crime gave some insight into U.S. terrorism, but it was limited. The contributions of this analysis were better suited to explain how frequencies of terrorism events changed over time.

Foreign born and foreign born not-naturalized were variables sourced from migration and terrorism literature as well as current perceptions of terrorism portrayed by media and government officials. The results of the poisson regression models did not produce evidence in support for the current rhetoric or previous literature. Supporting the first hypothesis, populations with larger percentages of foreign born residents were not correlated with a higher frequency of terrorism events. Higher population densities were correlated with higher frequencies only in the 2000 large cities model, which partly supported the second hypothesis that more densely populated areas would experience higher frequencies of terrorism events. However, this hypothesis did not hold true in the 2010 model.

The results for the diversity measures were most surprising and not anticipated. The pre-9/11 results expressed an inverse relationship between higher percentages of the population identifying as Black and terrorism frequencies. In the pooled-time series model, the variances in both Hispanic and Black populations were inversely

correlated with more terrorism events. This change in diverse populations over time cannot be assumed as the causal mechanism for increased terrorism events. These results showed that in this sample, diverse populations experienced fewer terrorism events. However, in post-9/11 small cities, the Black population was positively correlated with a higher frequency of events while the time-series model showed that a decrease in the Black populations was correlated with a higher frequency of terrorism events. Considering the results from the pooled-time series model, the variance in the Black population was not significant when analyzing only small cities; the variance in the Black population cannot explain the 2010 small cities' result in Table 3. These results in some ways supported the demographic shifts and conflict literature. However, it is possible that the increased conflict or terrorism events may be leading to the relocation of diverse populations. From the pooled time-series model, the negative correlation between the change in diverse populations and increased terrorism events in all cities was evident, but the direction of that relationship cannot be assumed.

One explanation of this result may be tied to the phenomenon presented in Lori Peek's work, *Behind the Backlash* (2011). In her book, Peek analyzed the trends of increased hate crimes against Muslim Americans by interviewing New York and Colorado based Muslim Americans. She found that the American public was conflating terms such as Arab and Muslim. Many hate crime perpetrators were making cultural assumptions based on appearance and religious affiliations, attacking Muslims broadly as a whole in response to 9/11 and not only Muslims of Arabic descent (2011). Events were added to the GTD if they were deemed to meet any one of the three criteria by the researchers, as stated in the codebook. The GTD was subjective

by nature. The possibility of including other types of political crimes, like hate crimes, was expressed in the codebook. As there are several definitions of terrorism, and the tenets of hate crimes often fall within many of those terrorism definitions, the increase in hate crimes that Peek cited may also explain the correlation between increased diversity and higher frequency of terrorism events that was only evident in small cities, post-9/11. Additionally, considering the results of the pooled time-series model, the decrease in diverse populations over time being significantly correlated with increased terrorism events provided more evidence for this backlash explanation. The results based on diversity measures in both tables 3 and 4 provided enough evidence to support reconsideration of the causal mechanisms between terrorism and the mobility of diverse populations. More research to understand the nuances of these results could better inform perspectives on migration and terrorism. Additionally, this research cannot capture percentages of each city's population that identified as Muslim. Further research needs to be done to determine the cause of this correlation. Census data at the county level included data on religious affiliation which if analyzed with terrorism events may provide more evidence for this backlash explanation of the produced results.

Analyzing other results determined that the mobility measures were significant in all three 2010 poisson models representing positive correlations with higher frequency of terrorism. Increased residential mobility within a city characterized a more unstable and transient population. The disorder index was significant in the 2010 all cities and small cities models. Residential mobility and the disorder index were also significant findings in the pooled time-series model. The variables that are included in the disorder index, vacant housing, renter occupied housing, median

income, and population below the poverty line, as well as mobility measures, constantly correlated with increased crime and homicides in criminology literature (Messner 1982; Williams 1984; Parker and Pruitt 2000; Parker 2001). These results were the clearest connections this study of terrorism had to violent crime and homicides.

In the 2000 all cities poisson model, the percentage of the population age 15 to 24 was positively correlated with increased frequency of terrorism events. Similar to the violent crime and homicide literature, larger populations of young adults in a city led to higher frequency of terrorism events pre-9/11. However, there is a shift in the results post-9/11; this same population was inversely correlated with a higher frequency of terrorism but only in large cities. In the pooled time-series cross-sectional model, the variance in the age variable was also significant. The pre-9/11 and time-series results were what would have been expected based on the criminology and homicide literature (Messner 1982; Williams 1984; Parker and Pruitt 2000; Parker 2001). However, the age results of the poisson regression, for post-9/11 large cities, were unexpected. It showed that the 15-24 year old age group was inversely correlated with an increase in frequency of terrorism events. One possible explanation for this finding was that youth were more tolerant because many of them had grown up in more diverse communities. Large cities in the U.S. have greatly diversified and tolerance teachings have become part of school curricula (Hargreaves 2012; Salahuddin 2017).

Regionally, the measure for western states was significant pre-9/11 in the poisson regression models for the all city size distinction while the measure for northeastern states was not. In the time-series model, the variance in the regional

measure over time was only significant for northeastern states. These findings show that the frequency of terrorism events was far more variable in the Northeast than in other regions. Considering that New York City and Washington D.C. consistently had the highest frequencies of terrorism events of all cities throughout the 1999 to 2014 timeframe, this did not come as a surprise.

Limitations

The data set employed in this research only included terrorism events from 2000 and 2010. This gave a critical pre- and post-9/11 snapshot of current trends. For a broader view of the trends, future research could expand this analysis by including events and census data from the 1980's, 1990's, and the most recent events. Beyond expanding the timeframe of analysis, future research could expand the structural levels included in the analysis. Including county-level census data in a multilevel model would allow the incorporation of variables including religious affiliations and political party affiliations which have been strongly linked to perceptions of immigrants and refugees in previous literature (Mayda, 2004; O'rourke and Sinnott 2006). Other future research may inform counterterrorism efforts at the federal, state, and local levels of government through analyses of attack and weapon types most common in different cities and regions which will aid in city-specific preparation for terrorism attacks.

Within the 2000 and 2010 Census data, there were several differences in the measurements of certain variables, most notably in the mobility measure. In 2000, mobility captured any person who had moved in the previous 5 years and in 2010, mobility captured any person who had moved in the past 12 months. Between 2000 and 2010, the U.S. Census began using the American Community Survey which collects data from a representative sample each year. Some of the measures in 2010

were based on the 5-year estimates which are best used for smaller cities and towns (U.S. Census Bureau 2017) rather than just decennial census data.

The GTD included data on fatalities, which, if analyzed, could shed new light on the new versus old terrorism debate in previous terrorism literature. Overall there was a decrease in the number of events, but if an increase in fatalities per event was statistically significant over time, it would be consistent with the “new terrorism” literature and represent a shift toward more indiscriminate casualties. Understanding the trends in fatality rates will give researchers a clearer idea of the types of attacks that lead to more casualties and aid in counterterrorism efforts when planning and organizing future community gatherings in cities throughout the country.

The GTD collected types of data that could have generated several more interesting analyses. However, there was limited data on group versus individually perpetrated events. As noted in the literature review, debates surround the myth of lone wolf terrorists (Snowden 2005). With less missing data about the perpetrators, the GTD could shed more light on this debate. Additionally, in the literature, there is such a strong emphasis on motive when defining terrorism that not knowing the perpetrators leads to questions about whether some events should actually be labeled as terrorism. The number of cases included in the GTD, classified as doubtful, was a major limitation of U.S. events in this database. Future research could compare structural-level analyses of terrorism events for both doubtful cases and certain cases. This type of structural-level analysis could aid in clarifying whether those doubtful cases are terrorism events or whether they may be an entirely different phenomenon.

Chapter 6

CONCLUSION

Terrorism generates fear and anxiety through seemingly random attacks that make the average person feel that they could be among the next targets. In reality, terrorism events are not random. They often follow trends and patterns, even if those patterns are not apparent to the public due to the many motives and individual actors perpetrating the attacks. City-level factors related to crime could never capture a full explanation of why some cities experience higher rates of terrorism than others, but this analysis does add to the conversation. Considering the characteristics that are correlated with increased frequencies of terrorism events, city and state government stakeholders can better understand their own risks through targeted analyses of similarly sized cities' trends.

Small and large cities face different risks and should plan accordingly. Adopting the counterterrorism practices of New York City or Washington D.C. may not be successful in other cities. New York City and Washington D.C., in particular face the most unique threats. Being the economic and government capitals of the country made them targets for the catastrophic events of 9/11. No other event compares in loss of life or property, either in the US or world history (START 2017). Adapting strategies and new technologies from large cities, like New York, that face the highest frequencies of terrorism events may be beneficial. However, the threats faced in smaller cities appear to be intrinsically different from those faced in larger cities due to the varying size and scope of attacks. To understand this difference, more

research needs to be conducted on the types of attacks that different sized cities are more likely to face. Gauging the threat of terrorism to a city or town is a difficult task, but one that should be attempted. Pre-9/11, increased diversity was a positive force correlated with lower frequencies of terrorism events. The post-9/11 results for small cities that had higher rates of diverse populations were correlated with higher frequencies of terrorism events, but this research cannot address the causal mechanisms. The results of the pooled time-series model highlight the possibility that terrorism may be influencing migration and demographic characteristics, which is opposite to the causal mechanism assumed in the demographic change and conflict literature. Social amplification of the risk of terrorism is a likely influence in the negative results seen in the small city diversity measures post-9/11. Given that the pooled time-series model did not support a correlation between the variance in diverse populations and increased frequencies of terrorism events, but rather supported a correlation with decreased frequencies. This analysis did not support the previous literature arguing that demographic shifts cause violent conflict (Mathew 1993; Poe and Tate 1994; Sambanis 2001; Goldstone 2002; Thayer 2009) and that immigration leads to higher risks of terrorism (Humphrey 2002; Cohen 2002; Milton, Spencer, Findley 2013). Results showed no positive correlations for foreign born, foreign born not-naturalized, or Hispanic populations. Generally, measures for Hispanic and Black populations, representing diversity measures in this study, were inversely correlated with terrorism events or found to be insignificant. Further research can explore the one unexpected correlation between increased diversity and increased frequency of terrorism events in small cities. If a backlash against diverse populations due to the social amplification of the risk of terrorism is determined to be the cause of this

correlation, it offers the opportunity to reevaluate and change the influences of perceptions of terrorism by promoting effective risk communications.

REFERENCES

- Aguirre, Benigno E. 2003. "Homeland Security Warnings: Lessons Learned and Unlearned." *University of Delaware*: 1-14.
<http://dspace.udel.edu/bitstream/handle/19716/295/PP%20334.pdf?sequence=1>
- Altman, Adam. 2008. "Risk and the Imagined Response: An Analysis of the American Actuarial Reaction to 9/11." *Proquest* George Washington University UMI 1532579.
- Amos II, John W., and Russel H. S. Stolfi. 1982. "Controlling International Terrorism: Alternatives Palatable and Unpalatable." *The Annals of the American Academy of Political and Social Science* 463: 69-83.
- Beck, Nathaniel, Johnathan N. Katz, and Richard Tucker. 1998. "Taking Time Seriously: Time-Series-Cross-Sectional Analysis with a Binary Dependent Variable." *American Journal of Political Science* 42(4): 1260-1288.
- Beck, Nathaniel. 2001. "Time-Series-Cross-Section Data: What Have We Learned in the Past Few Years?" *Annual Review of Political Science* 4: 271-293.
- Blum, Scott Christopher. 2011. "Associations Between Prior Life Experiences and Perceptions of Risk of Future Terrorism, Crime, and Disaster in a National Longitudinal Study." University of California, Irvine.
- Chermak, Steven M., Joshua D. Freilich, William S. Parkin, James P. Lynch. 2012. "American Terrorism and Extremist Crime Data Sources and Selectivity Bias: An Investigation Focusing on Homicide Events Committed by Far-Right Extremists." *Journal of Quantitative Criminology* 28(1): 191-218.
- Cohen, Lawrence E. and Marcus Felson. 1979 "Social Change and Crime Rate Trends: A Routine Activity Approach." *American Sociological Review* 44(4): 588-608.
- Cohen, Mark Nathan. 1998. "Understanding the Rules People Live By: Cultural Systems and Cultural Variation" from *Culture of Intolerance: Chauvinism, Class, and Racism in the United States*. Yale University Press.

- Connolly, James J. and E. Bruce Geelhoed. 2003. "The Small-City Experience in the Midwest: An Introduction." *Indiana Magazine of History* 99(4): 307-310.
- Corrigan, John and Lynn S. Neal. eds. 2010. "A Documentary History" from Religious Intolerance in America. *University of North Carolina Press*.
- Crenshaw, Martha. 2011. "Chapter 5: The Debate Over 'Old' vs 'New' Terrorism." *Jihadi Terrorism and the Radicalization Challenge: European and American Experiences* edited by Rik Coolsaet (2): 57-67.
- Crenshaw, Martha. 2017. "When are Mass Shootings Acts of Terrorism?" *Freeman Spogli Institute for International Studies*. <https://medium.com/freeman-spogli-institute-for-international-studies/when-are-mass-shootings-acts-of-terrorism-2bf08070b343>.
- Danzell, Orlandrew E., Yao-Yuan Yeh and Melia Pfannenstiel. 2016. "Determinants of Domestic Terrorism: An Examination of Ethnic Polarization and Economic Development." *Terrorism and Political Violence*: 1556-1836.
- Department of Homeland Security. 2017. "National Terrorism Advisory System." *Department of Homeland Security*. <https://www.dhs.gov/topic/ntas#>
- Desilver, Drew. 2013. "U.S. spends over \$16 billion annually on counter-terrorism." *Pew Research Center*. <http://www.pewresearch.org/fact-tank/2013/09/11/u-s-spends-over-16-billion-annually-on-counter-terrorism/>.
- Desmarais, B. A. and J. J. Harden. 2013. Testing for zero inflation in count models: Bias correction for the Vuong test. *Stata Journal* 13: 810-835.
- Doyle, Richard B. 2007. "The U.S. National Security Strategy: Policy, Process, Problems." *Public Administration Review* 67(4): 624-629.
- Drake, Bruce. 2013. "Most Americans see terrorism as a part of life in the future." *Pew Research Center*. <http://www.pewresearch.org/fact-tank/2013/09/09/most-americans-see-terrorism-as-part-of-life-in-the-future/>.
- Duckett, Dominic and Jerry Busby. 2013. "Risk Amplification and Social Attribution." *Risk Management* 15(2).
- Gibson, James L. 1992. "The Political Consequences of Intolerance: Cultural Conformity and Political Freedom." *The American Political Science Review* 86(2): 338-356.

- Gibson, James L. 2008. "Intolerance and Political Repression in the United States: A half Century after McCarthyism." *American Journal of Political Science* 52(1): 96-108.
- Goldstone, Jack A. 2002. "How Demographic Change Can Lead to Violent Conflict." *Journal of International Affairs* 56(1): 4-22.
- Harell, Allison. 2010. "The Limits of Tolerance in Diverse Societies: Hate Speech and Political Tolerance Norms Among Youth." *Canadian Journal of Political Science* 43(2): 407-432.
- Hargreaves, David H. 2012. "The Challenge for the Comprehensive School: Culture, Curriculum, and Community" New York, NY. *Routledge*.
- Jenkins, Brian M. 1982. "Statements about Terrorism." *Annals of the American Academy of Political and Social Science* 463(1): 11-23.
- King, Gary and Langche Zeng. 2001. "Logistic Regression in Rare Events Data." *Political Analysis* 9(2): 137-163.
- Kis-Katos, Krisztina, Helge Liebert, and Gunther G. Schulze. Forthcoming. 201. "On the Origin of Domestic and International Terrorism." *European Journal of Political Economy*.
- Krieger, Tim and Daniel Meierrieks. 2011. "What Causes Terrorism?" *Public Choice* 147(1/2): 3-27.
- Kurzman, Charles, David Schanzer, and Ebrahim Moosa. 2011. "Muslim American Terrorism Since 9/11: Why So Rare?" *The Muslim World* 101(3): 464-483.
- Kurzman, Charles. 2014. "Muslim-American Terrorism in 2013." *Triangle Center on Terrorism and Homeland Security*.
- Kurzman, Charles and David Schanzer. 2015. "The Growing Right Wing Terror Threat." *The New York Times*.
- LaFree, Gary and Joshua D. Freilich. 2012 "Editor's Introduction: Quantitative Approaches to the Study of Terrorism." *Journal of Quantitative Criminology* 28(1): 1-5.

- LaFree, Gary, Laura Dugan, Min Xie, and Piyusha Singh. 2012. "Spatial and Temporal Patterns of Terrorist Attacks by ETA 1970 to 2007." *Journal of Quantitative Criminology* 28(1): 7-29.
- Mahoney, Timothy R. 2003. "The Small City in American History." *Indiana Magazine of History* 99(4): 311-330.
- Makholouf, Pierre. 1996. "Refugees and National Security." *Law and Democracy* (27): 16-17.
- Martinez, Ramiro, Jr., and Mathew T. Lee. 2000. "On Immigration and Crime." In *The Nature of Crime: Continuity and Change* edited by Gary LaFree 1:485-525. Washington, DC. National Institute of Justice.
- Mayda, Anna Maria. (2004). Who Is Against Immigration? A Cross-Country Investigation of Individual Attitudes toward Immigrants. *Review of Economics and Statistics*, 88(3), 510-530.
- Mears, Daniel P. 2001. "The Immigration-Crime Nexus: Toward an Analytical Framework for Assessing and Guiding Theory, Research and Policy." *Sociological Perspectives* 44: 1-19.
- Milton, Daniel, Megan Spencer, and Michael Findley. 2013. "Radicalism of the Hopeless: Refugee Flows and Transnational Terrorism." *International Interactions* 39(5): 621-645.
- Minnesota Population Center. 2016. "National Historical Geographic Information System: Version 11.0". Minneapolis: University of Minnesota. <http://doi.org/10.18128/D050.V11.0>.
- Morenoff, Jeffrey D., Robert Sampson, Stephen W. Raudenbush. "Neighborhood Inequality, Collective Efficacy, and the Spatial Dynamics of Urban Violence." *Criminology* 39(3): 517-560.
- Munson, Ziad. 2008. "Terrorism." *Contexts* 7(4): 78-79.
- Nacos, Brigitte L., Yaeli Bloch-Elkon, and Robert Y. Shapiro. 2007. "Post-9/11 Terrorism Threats, News Coverage, and Public Perceptions in the United States." *International Journal of Conflict and Violence* 1(2): 105-126.

- Nakashima, Ellen. 2015. "Domestic extremists have killed more Americans than jihadists since 9/11. How the government is responding." *The Washington Post*.
- Nandy, Vaskar. 2001. "War Against Terrorism: Perspective on Protests." *Economic and Political Weekly* 36(43): 4060-4062.
- National Consortium for the Study of Terrorism and Responses to Terrorism (START). 2016a. Global Terrorism Codebook.
- National Consortium for the Study of Terrorism and Responses to Terrorism (START). 2016b. Global Terrorism Database. Retrieved from <https://www.start.umd.edu/gtd>
- New America. 2016. "Terrorism in America After 9/11" *New America*.
<http://www.newamerica.org/in-depth/terrorism-in-america/>
- Newmann, Peter. 2009. "Old and New Terrorism. Late Modernity, Globalization and the Transformation of Political Violence." Cambridge, *Polity*.
- O'rourke, Kevin H., and Richard Sinnott, (2006). "The Determinants of Individual Attitudes Towards Immigration." *European Journal of Political Economy*, 22(4), 838-861.
- Parker, Karen E., and Matthew V. Pruitt. 2000. "Poverty, Poverty Concentration, and Homicide." *Social Science Quarterly* 81(2): 555-570.
- Parker, Karen F. 2001. "A Move Toward Specificity: Examining Urban Disadvantage and Race- and Relationship-Specific Homicide Rates." *Journal of Quantitative Criminology* 17(1): 89-110.
- Pasternoster, Raymond, Robert Brame, Paul Mazerolle, and Alex Piquero. (1998). "Using the Correct Statistical Test for the Equality of Regression Coefficients." *Criminology* 36(4): 859-866.
- Peek, Lori. 2011. "Behind the Backlash: Muslim Americans After 9/11." *Temple University Press*.
- Poe, Steven C. and C. Neal Tate. 1994 "Repression of Human Rights to Personal Integrity in the 1980s: A Global Analysis." *American Political Science Review* 88: 853-872.
- Posen, Barry R. 1993. "The Security Dilemma." *Survival* 35(1): 27-47.

- Pratt, Travis C. and Francis T. Cullen. 2005. "Assessing Macro-Level Predictors and Theories of Crime: A Meta-Analysis." *Crime and Justice* 32: 373-450.
- Robinson, Mary. 1996. "Tolerance." *The Furrow* 47(1): 3-8.
- Sambanis, Nicholas. 2001. "Do Ethnic and Nonethnic Civil Wars Have the Same Causes?" *Journal of Conflict Resolution* 45: 259–282.
- Shaw, Clifford, and Henry D. McKay. 1942. "Juvenile Delinquency and Urban Areas." *University of Chicago Press*.
- Sheppard, Ben, G. James Rubin, Jamie K. Wardman and Simon Wessley. 2006. "Terrorism and Dispelling the Myth of a Panic Prone Public." *Journal of Public Health Policy* 27(3): 219-245
- Stern, Jessica and J. M. Berger. (2015). "ISIS: The State of Terror." New York, NY. *HarperCollins Publishers*.
- Thayer, Bradley A. 2009. "Considering Population and War: A Critical and Neglected Aspect of Conflict Studies." *Philosophical Transactions: Biological Sciences* 364(1532): 3081-3092.
- U.S. Department of Justice. 2010. "Terrorism 2002/2005". <https://www.fbi.gov/stats-services/publications/terrorism-2002-2005>.
- The White House. 2015. "National Security Strategy." 1-35.
- Wadsworth, Tim. 2010. "Is Immigration Responsible for the Crime Drop? An Assessment of the Influence of Immigration on Changes in Violent Crime Between 1990 and 2000." *Social Science Quarterly* 91(2): 531-553.
- Weissbach, Lee Shai. 2005. "Patterns of Prejudice and of Transformation" from *Jewish Life in Small-Town America*. Yale University Press.
- Woods, Joshua. 2007. "What We Talk about When We Talk about Terrorism: Elite Press Coverage of Terrorism Risk from 1997 to 2005." *Press/Politics* 12(3):3-20.