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CHICAGO HOMICIDES COMPLETED WITH A FIREARM FROM 1971 TO 1993: A LENS OF SOCIAL DISORGANIZATION THEORY AND FIREARM LEGISLATION

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CHICAGO HOMICIDES COMPLETED WITH A FIREARM FROM 1971 TO 1993: A LENS OF SOCIAL DISORGANIZATION THEORY AND FIREARM LEGISLATION

by

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Abstract

CHICAGO HOMICIDES COMPLETED WITH A FIREARM FROM 1971 TO 1993: A TEST OF SOCIAL DISORGANIZATION THEORY AND FIREARM LEGISLATION

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Firearm legislation is a hotly debated topic in the light of recent mass shootings in Newtown, Connecticut and elsewhere. President Obama has introduced a firearm policy directed at curtailing firearm homicide. The literature on gun laws and their effect on crime are mixed. Some jurisdictions operate under strict firearm policies and others believe greater access to guns will deter potential criminals. This study uses social disorganization theory to test the effect of restrictive firearm policy in Chicago, Illinois from 1971 to 1993.

In particular, this thesis seeks to determine the rate of firearm homicides in the eleven years prior to the 1982 gun ban in Chicago versus the eleven years following 1982. Furthermore, social disorganization theory is tested when comparing gun murders in gentrifying communities to different community area types from 1983 to 1993. The results suggest Chicago's 1982 ban may have lowered the city's firearm murder rate during the eleven years after the ban. Moreover, gentrifying communities, while sharing common characteristics of social disorganization theory, had a moderating impact on

firearm homicides. The odd ratios from 1983 to 1993 Chicago gun murders increased in every community area type as compared to gentrifying neighborhoods.

Chapter One

Introduction

In the aftermath of several mass shootings in recent memory (Tucson, Arizona; Colorado movie theater; Newtown, Connecticut), legislators and advocates have debated the efficacy of further gun control and its possible effect in reducing violent crime (Lemieux, 2014; Weisman, 2013). Annually, very few victims of violent crime die by an armed gunman in a mass shooting situation (Bjelopera, Bagalman, Caldwell, Finklea, & McCallion, 2013). The Federal Bureau of Investigation (FBI) defines mass shootings as the murder of at least four people in a single location with no cooling-off period (Morton, 2008). These incidences, while horrific, attract the attention of the media, while failing to acknowledge mass shootings are an anomaly, not the norm (Fox & DeLateur, 2014).

Since the December 2012 mass shooting in Newtown, Connecticut, gun legislation and the Second Amendment have become the focus of citizens, researchers, and politicians (Ropeik, 2014; Metzl & MacLeish, 2015; Pew Research Center, 2014). Approximately a month after the mass shooting, President Obama unveiled his plan to reduce gun violence. The policy called for enhanced background checks for persons attempting to buy firearms, various methods to strengthen law enforcement's fight against crime, and a reinstatement of the assault weapons ban which ended in 2004 (The White House, 2013).

While Newtown and other mass shootings receive extensive media coverage and prompt debate about gun control, research into gun laws and their effect on violent crime is unclear. Some scholars find increasing firearm ownership rates are correlated with

more crime. Duggan (2001), for example, found states with higher gun ownership have increased violent crime. Other research finds no credible link between levels of firearms and violent crime. For example, the National Academy of Sciences' 2004 report examined all relevant literature on the topic and uncovered no credible conclusion as to the relationship between crime and guns (The National Academy of Sciences, 2004).

Two landmark cases concerning the Second Amendment have recently been tried before the United States Supreme Court. In the 2008, in case of *District of Columbia v. Heller*, the court overturned a Washington D.C. ordinance which forbade handgun registration, while simultaneously making it a crime to have an unregistered firearm in a private residence (*District of Columbia v. Heller*, 2008). Furthermore, city code forbade a loaded and assembled gun in the home unless a trigger-locking device was attached (Jones, 1981).

Special Police Officer Dick Heller sued the District of Columbia after his petition to keep a registered handgun in his home for self-defense was turned down by the city government. His lawsuit claimed the District of Columbia firearm ordinances violated his Second Amendment right "to keep and bear Arms" (U.S. Const. Amend. II). In a 5-4 decision, the Supreme Court struck down the law on the basis that the Second Amendment gave gun owners the right to self-defense while inside their homes (*District of Columbia v. Heller*, 2008).

In 2010, the U.S. Supreme Court overturned Chicago, Illinois' longstanding firearm ban, which in effect, extended the *Heller* ruling to the states. The city of Chicago and its suburb of Oak Park asserted the Second Amendment applies only to the federal

government. Therefore, they argued, their effective firearm prohibition was constitutional. Similar to Washington D.C.'s firearm ordinance, Chicago outlawed the ownership of unregistered guns while concurrently forbidding firearm registration. In effect, these legal moves banned guns in Chicago. In contrast, Oak Park removed all conflicting language by outright banning all firearms. The lead plaintiff, Otis McDonald, was a retired maintenance engineer at the University of Chicago who lived in a high crime neighborhood on the city's south side. He decided to bring forth a lawsuit against the city's handgun ordinance after his car was blocked in by three young males who verbally assaulted McDonald (Babwin, 2014).

In the present study, the author examines the effect of the firearm ban in the city of Chicago on murders with a firearm. In 1982, the Chicago City Council outlawed the ownership of unregistered firearms while concurrently forbidding gun registration. In effect, these legal moves banned firearms in Chicago. The City Council enacted the firearm limitations at a time when crime was actually declining. Data shows index crime in the city was falling prior to the implementation of the virtual ban (Papachristos, 2013). The city's governing body enacted the de facto gun prohibition in order to defend its citizens against firearm-related crimes (City of Chicago, 1982). However, it is unclear if the gun ban had the council's desired result. In 1983, the first complete year in which the firearm law was in effect, 40% of murders in Chicago involved a handgun (Chicago Police Department, 1983).

Following 1983, the city council appeared to be right about firearm prohibition in Chicago. From 1984 to 1987, the handgun murder rate plateaued (Chicago Police

Department, 1984, 1985, 1986, 1987). This trend of relative stability in murders was also consistent for national level data (Bureau of Justice Statistics, 2011). However, this direction turned sharply in 1988 when Chicago handgun murders rose by 20%. Similarly, murder in the United States increased in the late 1980s (Bureau of Justice Statistics, 2011).

Whereas Chicago and nationwide trends in homicide by handgun were similar up to the early 1990s, the United States' handgun homicide rate was only 67% by 2008 (Federal Bureau of Investigation, 2008) compared to 80% in Chicago (Chicago Police Department, 2008). Papachristos (2013) analyzed crime trends in Chicago from 1965 to 2013 and found violent crime rose steadily until its pinnacle in 1991. By 2013, the city followed national trends, with index crimes declining to levels not seen since 1973 (Papachristos, 2013).

The violence in urban centers like Chicago, including firearm homicides, can be explained by social disorganization theory. In their landmark work, Shaw and McKay (1942) contended communities which produce increased levels of crime share common characteristics of disorganization. Particularly, Shaw and McKay suggest ethnic heterogeneity, poverty, and residential instability are three factors that contribute to social disorganization in communities. The social disorganization of neighborhoods plays an integral part in causing crime. Specifically, the amount of crime should vary by community indicators of social disorganization (e.g., amount of poverty, racial make-up, age, and number of single-parent households within a neighborhood).

Restrictive firearm legislation, such as in Chicago, the sample city of Shaw and McKay's work, has attempted to stop the gun crime in a city with clear characteristics of social disorganization. While in its infancy social disorganization theory applied to juvenile offenders, it is reasonable to assume it should apply to adults as well. This has been pointed out by Thrasher (1963) and Shaw and McKay (1942) who note the similarities among group characteristics of offenders, no matter the age. Furthermore, Shaw and McKay find high levels of youth offenders being rearrested after maturing into adulthood.

However, another form of residential instability, gentrification, is a factor which did not exist during the time of Shaw and McKay's writing. Gentrification—the process of replenishing dilapidated inner-city areas, often at the expense of poor and working-class residents—is an important factor potentially contributing to residential instability and the factors associated with it (i.e., instability and heterogeneity). Based on Shaw and McKay's (1942) social disorganization theory, the author posits that the effect of the Chicago firearm ban differs based on level of neighborhood social disorganization. Specifically, the author compares neighborhoods at consistent levels of social disorganization during the time of the handgun ban (i.e., stable upper-class, stable middle-class, impoverished, and extremely impoverished) and neighborhoods transitioning during this time period (i.e., neighborhoods experiencing positive change as well as neighborhoods in mild, moderate, and severe decline) to gentrifying neighborhoods.

The researcher uses logistic regression to measure the influence of the Chicago, Illinois firearm ban on murder by firearm from 1971 to 1993. The author chose this time span because it represents 11 years prior to the firearm ban and 11 years after the ban went into effect. The year of the ban, 1982, is not included since the murder data available for this study cannot be disaggregated into monthly level data. Particularly, the following questions are asked:

1. Did the gun ban in Chicago decrease firearm murders in the 11 years after the ban compared to the 11 years prior to the ban?
2. Did the effects of the Chicago gun legislation differ by neighborhood indicators of social disorganization?

Below, the researcher outlines Shaw and McKay's (1942) social disorganization theory. The author then reviews literature on variables related to social disorganization such as poverty, race-ethnicity, female-led households, age, and neighborhood instability; as well as literature on the relationship between firearm legislation and violent crime. Finally, the author discusses the data, plan of analysis, and findings from the research. This study will add to the increasing body of knowledge on firearm legislation, neighborhood disorganization, and violent crime.

Chapter Two

Social Disorganization Theory

The causes of violent crime have been the focus of numerous studies. Shaw and McKay's (1942) social disorganization theory hypothesizes poverty, ethnic heterogeneity, and neighborhood instability lead to crime in an urban environment. The authors of social disorganization theory were influenced by the work of fellow University of Chicago ecologists Robert E. Park and Ernest W. Burgess. Park and Burgess (1925) explored the causes of urban expansion by noting similarities in cities which have grown beyond their designated limits. Furthermore, the authors identify five concentric circles into which the city of Chicago was delineated by employment and residential characteristics. These circles include the downtown business area, a zone of transition, an area of residences which have moved away from deterioration, relatively affluent neighborhoods, and suburban areas which are within an hour's car ride to downtown (Park & Burgess, 1925).

Park and Burgess contend cities are in a constant struggle between disorganization and reorganization. For instance, disorganization occurs when immigrants to a city, such as Chicago, change their habits and disregard some values on which they were raised. Reorganization occurs when the reshuffling of habits and values are modified to fit what the current environment accepts. In the transition zone of a city, directly outside the downtown business area, is the sector of poor communities which produce crime. Park and Burgess (1925) refer to the transition zone as the "slum" and

note the ethnic heterogeneity of these disorganized communities. Unstable communities lack social controls, leading to high levels of crime and an unstable existence for residents (Shaw & McKay, 1942). It is the crime creation factors of the disorganized neighborhoods on which Shaw and McKay developed social disorganization theory.

Shaw and McKay's (1942) study concentrated on juvenile crime rates for the city of Chicago using data from 1900 to 1906, 1917 to 1923, and 1927 to 1933. Their major finding is the continuing high level of crime for the same disorganized communities, regardless of the years involved. These high crime neighborhoods attract the most recent immigrants and migrants who find jobs in the nearby industrial center of the city. The residents lack the means to hold professional employment and must live in inexpensive housing that is built on the edge of the manufacturing center of Chicago (Shaw & McKay, 1942).

While Shaw and McKay originally applied their theory only to a juvenile population, other researchers have tested social disorganization theory with adult samples. A few of these authors are Sampson and Groves (1989), Thrasher (1963), and Kornhauser (1978). To one extent or another, these researchers have noted the continuation of offending from juveniles to adults in socially disorganized communities. The inability of these neighborhoods to enforce formal and informal social control helps explain why Shaw and McKay's theory can apply to adult offenders (Kornhauser, 1978).

Furthermore, Shaw and McKay (1942) point to two conflicting sets of values which exist in disorganized communities. The authors postulate the dominance of mainstream social values (i.e., the acceptance of religion, education and legitimate employment pursuance in obtaining wealth), while a fringe set of values (e.g., the

rejection of social institutions like church, school, and legitimate employment) is accepted by some residents. Impoverished adolescents reject mainstream social values by adopting delinquent methods to secure material wealth. This rejection of school and legitimate employment is unique in an urban environment, where individuals are less likely to interact with neighbors and other agents of social control. The anonymity of city life distinguishes urban poverty from rural poverty as it relates to crime. Small rural communities increase the visibility of one's actions, which acts as a form of social control.

The family structure is also integral in keeping at-risk juveniles from accepting the value system of their delinquent peers. More specifically, the presence of two parents in a home has been defined as a positive social control. Negative social control in the family structure would be the absence of one parent. When one parent does not take on the responsibility of caring for his or her child, a deviant culture may intervene for at-risk youths who seek the companionship of criminal adolescents (Kingston, Huizinga, & Elliot, 2009).

In socially disorganized urban environments, forms of social control (e.g., parents, extended family, peers, neighbors, law enforcement, agencies that specialize in providing services to underprivileged families) break down. Instead of serving as agents of social control, adolescents learn from older deviant adolescents and adults about how to become delinquent (Shaw & McKay, 1942). However, not all recent immigrant groups go through disorganization while transitioning to a new environment. Shaw and McKay note the lack of high crime in areas of Asian immigration. The researchers proscribe the lack of crime to the continuance of traditional values from the native country which has

kept immigrant children from accepting a set of fringe social values (Shaw & McKay, 1942). More recently, other research has shown first generation immigrants from Latin America to the United States have similar social control processes, which reduce the propensity for crime (Martinez, Stowell, & Lee, 2010).

Following World War II, the suburbanization process destabilized Shaw and McKay's static model of constant urban replacement of immigrants and migrants moving to residential communities adjacent to industrial zones (Schuerman & Korbin, 1983). In addition, Shaw and McKay's Chicago of the early 20th century experienced ethnic heterogeneity, with white immigrants migrating to traditionally white communities and black immigrants moving to the Black Belt of the city. As new immigrants moved into Chicago, their new residences were often dominated by other immigrant groups which had resided in the city for one generation or more. Eventually, the new immigrants would replace the older group as the ethnic make-up of the community changed. Thus the recent immigrants would become the dominate race-ethinicity in that portion of Chicago (Shaw & McKay, 1942). During the 1950s, however, the migration patterns changed considerably. Black immigrants moved into historically white communities, thus changing the "invasion and succession process" of Shaw and McKay (Bursik, 1986, p. 40).

It was not until Sampson and Groves' (1989) research that key concepts in social disorganization theory were operationalized and tested. Prior to their work, many articles had been undertaken which measured the effects of Shaw and McKay's theory. In these studies, the amount of social disorganization was usually captured by such factors as employment rates, poverty rates, and household incomes. Sampson and Groves sought to

identify the real world variables which could define social disorganization (Sampson & Groves, 1989).

In their attempt to define social disorganization, Sampson et al. (1997) operationalize Shaw and McKay's neighborhood instability. Sampson et al. (1997) find stable residency (persons who have lived in the same house for at least five years; and proportion of owner-occupied houses) to be correlated to community organization. Other research has corroborated Sampson et al.'s work by showing a lack of stable residential population and high rates of poverty are paramount to the creation of delinquency in a community (Kingston et al., 2009).

It is important to note, however, that research has shown a lack of social control may also lower crime. When social control is defined as a community's level of interaction, it has been pointed out that crime may decrease in areas of low neighbor-to-neighbor cooperation (Bellair, 1997). This could be possible due to the expectations of many urban residents to interact with other members of their community on a limited basis (Bellair, 1997).

As stated earlier, Shaw and McKay's (1942) theory may have been more relevant to pre-World War II Chicago ecology. The Post-War era brought new changes, such as suburbanization and gentrification, which undermined social disorganization theory's doctrine of invasion and succession of communities—the idea of one immigrant group replacing an older immigrant group in urban settings, yet the same indicators of crime causation remaining.

Moreover, social disorganization began to subside in importance to researchers during the 1960s and 1970s. One major criticism has been the attempt to measure Shaw

and McKay's theory with certain intervening variables as: collective efficacy, social control, and informal control. These concepts are seen as lessening the factors which cause social disorganization (i.e. poverty, family structure, and unemployment). However, early research operated under the assumption that these concepts mitigated a community's level of social disorganization. Research to rectify this did not begin until the late 1980s (Kubrin & Weitzer, 2003).

Also, some of the concepts, like social ties and informal control, have been tested individually without accounting for any similarities among the variables. Furthermore, a neighborhood can have multiple levels of social control within it, thus confusing the research even more. For instance, elements may work to enhance organization while others work to undermine it. Essentially, a lack of operationalization exists for each concept with which to measure social disorganization theory (Kubrin & Weitzer, 2003).

Other criticism stems from Kornhauser's 1978 critique of the environment's impact on criminology in her book *Social Sources of Delinquency.* One of the major criticisms she gives researchers of the era is their overestimation of cultural relativism. This means that definitions of what is right and wrong are determined by the group. The individual and the decisions he or she makes are lost within the outside factors being enacted on the person based on the surrounding environment. Kornhauser did not deny environment plays an important role in shaping behavior, she merely suggested other variables should be integrated into group criminological studies.

Furthermore, research has not been able to distinguish exactly what the definition of a community is. Academics rely heavily on official data which tends to break neighborhoods into census tracts, blocks, and other rigid delineations. However, residents

in these communities may not view the next street over as part of their neighborhood. If one were to ask three residents what they thought about the boundaries of their community are, one is likely to receive three different answers (Bursik, 1988).

Another criticism is researchers' overreliance on official crime data. Shaw and McKay's reliance on juvenile court records is just an example. Often, the police department's tendency to over-patrol certain neighborhoods known to be high in crime can cause a misrepresentation of the true nature of crime in the community. Other methods of data collection, such as surveys, have been used to measure criminal activity in order to garner a better understanding of the neighborhood's criminal activity and willingness to report it (Bursik, 1988)

Chapter Three

Literature Review

While the theoretical inspiration for this paper was explored in the last chapter, this chapter reviews literature related to Shaw and McKay's landmark research. For this thesis, the author tests Shaw and McKay's (1942) social disorganization theory using the nine community types as specified by the University of Illinois at Chicago's Voorhees Center for Neighborhood and Community Improvement. The Voorhees Center (2003) used census data collected in 1970, 1980, 1990, and 2000 to measure community area change in the city of Chicago, Illinois. Particularly, they examined the racial make-up, percentage of single-parent, female-led households, and indicators of socioeconomic status (i.e., percentage of the community with a 4-year college education, median family income, percentage of owner-occupied housing, percentage of families below the poverty line, percentage of the community's workforce in managerial or professional positions, percentage of private schools) for each of the 77 communities in Chicago, Illinois.

Below, the literature is reviewed pertaining to the relationship between these indicators, community area social disorganization, and violent crime. In addition, the author has conducted an extensive literature review into firearm-related crime in the United States. This literature review will provide the necessary background information in order to properly analyze the research questions posited in this thesis: (1) Did the gun ban in Chicago decrease firearm murders in the 11 years after the ban compared to the 11 years prior to the ban? (2) Did the effects of the Chicago gun legislation differ by neighborhood indicators of social disorganization? In the section below, the literature

pertaining to homeownership, low-income housing, property value, and crime is reviewed.

Homeownership, Low-Income Housing, Property Values, and Crime

The residential instability element of Shaw and McKay's social disorganization theory holds that disorganized communities are in constant adjustment as residents move from one low-cost rental property to another (Shaw & McKay, 1942). In contrast, residential stability reduces signs of urban decay; such as graffiti, homelessness, and juvenile deviance (Lindblad, Manturuk, & Quercia 2013). Homeowners have greater motivation to maintain or improve their property and neighborhoods. The fluctuation of real estate prices, which is dependent on the condition of a home and its surrounding area, can influence homeowners to care for the upkeep of their and their neighbors' properties (Dietz & Haurin, 2003; Herbert & Belsky, 2008).

In addition, property upkeep may be higher among homeowners than renters because a house purchase is a big, long-term investment for the buyer. If residential upkeep is low in a neighborhood, it will be difficult to sell the property due to the readily apparent indicators of disorder (e.g., graffiti, un-mowed lawns). Renters can simply let their lease expire and move to another area, whereas the homeowner may have problems when trying to move out of the community (Dietz & Haurin, 2003; Herbert & Belsky, 2008).

However, if homeowners detect an increase in crime for their neighborhood, they may not band together with other residents. Homeowners may have the option to move out before the perception of increased crime reaches outside the community (Hipp, Tita, & Greenbaum, 2009). Other research has shown newer residents in a community perceive

less crime than long-time residents (Hipp, 2010). This runs counter to Shaw and McKay's residential instability component in that crime itself may cause the mobility of residents and not the other way around. In particular, Morenoff and Sampson (1997) observe the increased out-migration of Chicago residents from murder-prone neighborhoods. This leads to a decline in population, not an influx of new residents into the communities (Morenoff & Sampson, 1997). High rates of urban homicide, of which Chicago has almost reached the dubious figure of 1,000 murders per year for several different years (Chicago Police Department 1991; 1992), cannot be accounted for solely by social disorganization theory.

Another aspect in the relationship between homeownership and crime is the case of low-income housing. Research shows mixed results pertaining to the effects of low-income housing on crime. Philadelphia's Nehemiah project of the mid-1990s constructed townhouse projects for low-income families in two of the city's poorest and most crime-infected communities. While these two communities increased homeownership in two of Philadelphia's poorest neighborhoods, it had little effect on crime. In addition, the Nehemiah projects did not increase surrounding property values, and instead became middle-class enclaves in two poverty-stricken areas (Cummings, DePasquale, & Kahn, 2002).

New York City also undertook the construction of affordable housing between 1987 and 2008. Approximately 230,000 housing units were added to low-income communities. The new construction also gave the chance to remove signs of urban decay. In contrast to the Nehemiah project, property values increased in the low-income and surrounding neighborhoods. Similar to the results in Philadelphia, however, the new

investment did not reduce crime. Although crime rates substantially decreased during the 1990s, New York City's affordable housing effort most likely did not cause the decline (Lens, 2013).

A recent study conducted by Albright, Derickson, and Massey (2013) measure the effects of subsidized housing in the city of Mount Laurel, New Jersey. The housing project, known as ELH, opened adjacent to an affluent community between the years of 2000 and 2004. In contrast to the projects in Philadelphia and New York, the Mount Laurel project included extensive background checks, criminal history reports, and routine house visits by property managers are part of the criteria for residential placement. Although low-income families make up a majority of residents, planners have allowed moderate-income families to live in ELH in order to keep poverty concentration to a minimum. The strategy seems to have worked with no increase in crime for the affluent neighborhood in which EHL was built. In addition, property values have not declined; a fear of the upper-income residents prior to construction of the subsidized housing. The authors hypothesize the rejection of applicants with extensive criminal records and the willingness to evict problem residents. Furthermore, the racial composition of renters is mixed with blacks accounting for 60% of residents and Hispanics accounting for 30% (Albright et al., 2013). Given Shaw and McKay's ethnic heterogeneity tenet, it seems—at least in the case of Mount Laurel, New Jersey—subsidized housing has not caused social disorganization or increases in crime.

Without accounting for subsidized low-income housing, other research has uncovered a noticeable link between crime and property value. Pope and Pope (2012) analyze data at the zip code level for the entire United States from 1990 to 2000 and find

increases of property value as little as 7% and as much as 19%. Moreover, the 10% of zip codes which represent the most violent in the United States added an estimated $11,000 in property value per house. This across the board increase in property values for 3000 zip codes coincides with the largest, sustained crime reductions in the last fifty years (Pope & Pope, 2012). In addition, crime has been shown as the impetus of declining property values (Schwartz, Susin, & Voicu, 2003; Tita, Petras, & Greenbaum, 2006). Schwartz et al. (2003) find a relationship between rising violent crime rates and falling property values in New York City. These studies indicate an inverse relationship between crime and property values.

Likewise, another principle of social disorganization theory could be influenced by fluctuating real estate prices. Hipp et al. (2009) believe the lowering of property values can lead to an increase of neighborhood ethnic heterogeneity. The authors postulate the reluctance of white homeowners to migrate to racially diverse communities as a possible cause for the increase of racially disparate communities. The ethnic turnover in the neighborhood could be the causation for lower levels of residential responsibility; thus potentially leading to more crime (Hipp et al., 2009; Sampson & Raudenbush, 2004). Moreover, the ethnically diverse communities experience increased levels of crime and decreased levels of homeownership (Hipp et al., 2009). This is consistent with Shaw and McKay's (1942) residential instability component of social disorganization theory.

Variables like low-income housing, property values, and homeownership are related to social disorganization to one degree or another. In addition, homeownership can cause increased levels of residential awareness and responsibility, which has been

shown to reduce crime. However, the attempt to create homeowners in communities of concentrated poverty has had a negligible effect on crime.

Education, Unemployment, and Crime

In Shaw and McKay's conflicting community values system, urban juveniles are exposed to a set of conventional norms and a set of deviant norms. The conventional norms recognize education and legitimate employment as pathways to obtaining material wealth. Deviant norms reject education and legitimate employment, yet still recognize monetary wealth as a sought-after goal (Shaw & McKay, 1942). Toby (1957) believes the lack of promoting superior school performance in disorganized neighborhoods leads to employment failure. If a child decides to drop out of school, he or she is limited in legitimate job opportunities (Toby, 1957). Current research consistently corroborates this finding. Olson (2006) finds children who graduate high school are less likely to be unemployed. Furthermore, in 2013, 29% of those aged 20 to 24, who did not have a high school diploma, were unemployed (U.S. Department of Education, 2014). In addition, high school dropouts make up a large proportion of prison inmates (Scott, 2010).

Clearly, education is linked to unemployment and social disorganization. Recent studies find high rates of unemployment for young criminals entering prison. While not all unemployed persons are turning to crime to supplement their lifestyles, it is apparent employment can help mitigate the likelihood of becoming deviant. It is important, however, to distinguish those who are unemployed from individuals who have dropped out of the workforce. The Bureau of Labor Statistics defines unemployment as persons who have been looking for a job within the prior four weeks. The BLS considers those individuals who are not actively seeking work as 'not in the labor force' and defines them

as individuals "who did not actively look for work in the prior 4 weeks for such reasons as school or family responsibilities, ill health, and transportation problems, as well as those for which reason for nonparticipation was not determined" (Bureau of Labor Statistics, 2009, p. 2). While many of these people are retired or students, roughly 1 in 10 are able-bodied and fit for employment (Bureau of Labor Statistics, 2014).

Research indicates increased levels of social disorganization will lead to more individuals dropping out of the labor market. McGahey (1986), for example, finds adults who are perpetually out of work have a positive impact in increasing social disorganization. The lack of informal controls in the three poor Brooklyn, New York neighborhoods he studied led to greater rates of juvenile delinquency. The author finds that when youths are faced with few legitimate employment options, social structures breakdown and property crime, illegal drug sales, and other deviance increases (McGahey, 1986).

Secondary employment may also help explain the social disorganization-unemployment link. Secondary employment is defined as unstable, irregular employment for which employees are usually paid in cash and pay no taxes. Studies have found a positive association between secondary employment, unemployment, and violent crime rates in the cities of Seattle, Washington D.C., and Cleveland (Crutchfield 1989; Crutchfield & Pitchford, 1997; Crutchfeld, Glusker, & Bridges, 1999; Peterson & Krivo, 2005). In fact, murder, rape, robbery, and aggravated assault show a strong relationship to secondary employment (Crutchfeld, 1989). In addition, Peterson and Krivo (2005) control for different age categories—teenagers (15-19), young adults (20-24), and older adults (25 and older)—and find increased violent crime rates for young adults who are

either unemployed or have unsteady, marginal employment. This study adds an interesting age breakdown that has not previously been explored and provides insight into how the experience of financial strain among young adults may lead to acceptance of deviant values in disorganized neighborhoods.

Looking specifically at the link between unemployment and murder rates, Nunley, Seals, and Zietz (2011) study found inflation and unemployment rates account for 80% of the fluctuation of the murder rate during the years 1960 to 1980. In addition, approximately 40% of the murder decline from 1980 to 2000 can be explained by inflation, unemployment, and a smaller population of 15 to 24-year-olds. More specifically, age can account for two-thirds of the murder decline while inflation and unemployment are responsible for the remaining one-third (Nunley et al., 2011).

There is strong evidence to suggest unemployment is a causal factor for crime. While employment seems to mitigate one's likeliness of committing crime, there are different variations to employment which can affect delinquency. Nevertheless, it has been shown that holding a job can lead to benefits other than making money.

Concentrated Poverty, Race-ethnicity, Single-parent female-led households, and Crime

Shaw and McKay (1942) hold the tenant that as an urban community changes in ethnic or racial composition the crime rate will remain steady. During the time of Shaw and McKay's writing, there was a mass influx of Southern blacks into Chicago. Black migrants soon came into conflict with European immigrants in the city's labor market. The competition that arose for decent-paying manufacturing jobs caused ethnic

antagonisms (Baskerville, 2001). These labor sites became areas of concentrated poverty due to restructuring of the local economy.

Since the 1960s, the United States has been moving away from a manufacturing-based economy to a more service-oriented economy, resulting in the loss of decent-wage, unskilled manufacturing jobs. This has led to unemployment for inner city residents (who had found steady work in factories and other manufacturing facilities) or employment in poor paying service industry jobs (Kasarda, 1995; Wilson 1987, 1996). These low paying jobs are less likely to foster strong worker attachments to the place of business. Furthermore, research has shown service jobs increase marginal employment and movement out of the work force altogether (McGahey, 1986; Crutchfeld & Pitchford, 1997). The loss of decent wage, manufacturing jobs has led to shrinking tax revenues, declining schools, and limited availability of social services to the urban poor, resulting in concentrated poverty and increased levels of crime in urban environments (Wilson, 1996). It is important to note Northern and Midwestern cities, like Chicago, suffered the greatest setbacks in manufacturing losses (Wilson, 1996).

Massey and Denton (1993) analyze the rise of concentrated urban poverty since the 1970s and find that as racial segregation increases, the economic situation deteriorates in these poverty stricken communities. Racial segregation leads to fewer job opportunities, less emphasis on education, and a general breakdown of social efficacy to control crime (Shaw & McKay, 1942; Massey & Denton, 1993). Bureau of Labor Statistics' (BLS) data indicates African-Americans make up a disproportionate amount of those who have dropped out of the labor market. While blacks account for 11.4% of employed Americans, 21.5% of African-Americans have stopped looking for work. A

recent study by the Chicago Urban League finds 92% of the city's 16 to 19-year-old black males are unemployed, while roughly 80% of the same demographic are unemployed nationally. The Chicago Urban League theorizes the joblessness is due to a shrinking labor market in which adults now fill the positions that used to be held by young adults (Chicago Alternative Schools Network, 2014).

Lee (2000) finds a higher concentration of poverty correlates to increases in homicide in U.S. cities with populations of at least 100,000. This confirms an earlier finding, the National Institute of Justice's Project on Human Development in Chicago Neighborhoods (1997), which notes concentrated poverty is causally related to violent crime. According to the FBI (2012), black arrestees account for almost 50% of all murders, 33% of rapes, 55% of robberies, and 34% of aggravated assaults despite being only 13% of the United States population (United States Census, 2013). Moreover, out of all part I and part II index crimes, black Americans are overrepresented in all but two categories; liquor laws (13.7%) and driving under the influence (12.1%) (FBI, 2012). However, poverty and the lack of educational and employment opportunities have been shown to account for criminal differences among black and white urban residential areas.

Sampson (1987) is one of the first researchers to investigate the causes of the unemployment-crime dilemma and connect it to race-ethnicity. He finds a linkage between urban black male unemployment which leads to an increase in single, female-dominated households. The family "disruption was substantially related to rates of black murder and robbery" (Sampson & Wilson, 1995, p. 40). Furthermore, this trend was particularly true for adolescent males (Sampson & Wilson, 1995). Veysey and Messner (1999) adopt the "weakening of primary relationships" (p. 160) as a precursor to

loosening of social controls and the subsequent acceptance of alternative values. Although Shaw and McKay do not explicitly state female-led households as a component of their theory, it has been recognized as being a cause of juvenile delinquency.

Evidence suggests single black female-led households contribute more to violent crime than joblessness prevalence (Sampson & Groves, 1989). The same finding holds true for single white female heads of the household. However, single black females are more likely to live in concentrated urban poverty (Sampson & Wilson, 1995). This appears consistent with Apel and Kaukinen's (2008) study which finds two-parent families to have the lowest rate of criminality. This is a reasonable expectation when considering two-parent families are less likely to face transitions which interrupt the early household development of children (Schroeder, Osgood, & Oghia, 2010). In addition, LaFree, Baumer, and O'Brien (2010) find cities with similar rates of black and white single female led households tend to be similar in murder percentages. These studies point out the series of falling dominoes which can negatively impact a community. The increased levels of male unemployment lead to more single female-led households. Criminality is then manifested from these issues (LaFree et al., 2010).

Ethnic Immigration, Hispanics, and Crime

While much literature has been written examining African-Americans and crime, until recently the immigrant Hispanic community (now the United States' largest minority group) has been ignored. Martinez (2002) notes the similar socioeconomic situations in which urban blacks and Hispanics reside. However, Martinez, Stowell, and Lee (2010) dispute Shaw and McKay's ethnic immigration principle as contributing to crime among Hispanic populations. Their study of San Diego homicides from 1980 to

2000 reveal a lower rate of violent crime and fewer non-black victims in communities dominated by foreign-born immigrants. In addition, the foreign-born dominated neighborhoods show a decrease of violent crime as time passes.

Furthermore, Shaw and McKay's research focuses on an urban industrial environment which grows into surrounding communities and causes a significant amount of deterioration. Social disorganization theory does not allow for foreign-born immigration neighborhood stability in urban environments; nor does it allow for community gentrification where impoverished residential areas are revitalized when poor residents sell their property when the value increases (Martinez et al., 2010). In fact, immigration may help a neighborhood's collective responsibility in an urban environment (Lee & Martinez, 2006).

Lee (2003) explores the homicide rates of Hispanics in San Diego, a city bordering Mexico in Southern California. The city has a large, poverty-stricken Hispanic population which experienced the same rates of murder for whites and blacks from 1985 to 1995. Moreover, Lee (2003) finds Hispanics to have less victimization rates than blacks who share the same levels of disadvantage.

Similar to Chicago, Martinez et al. (2010) reveal San Diego experienced a homicide increase during the 1980s, then a fast decline in the 1990s. Hispanic homicide rates were lower than blacks, however, higher than the murder rate for whites. This occurred even though San Diego experienced a massive immigration (53% increase) of foreign-born residents from 1980 to 2000. Martinez et al.'s (2010) testing of social disorganization finds poverty to be a correlate to homicide. However, rising immigration, lowered owner-occupied housing, and an increase in short-term residents are not

indicators of high homicide rates for Hispanics during the thirty years examined (Martinez et al., 2010).

Support for Martinez et al. (2010) is tested by Martinez, Stowell, and Cancino's (2008) research into San Diego and San Antonio homicide rates for recent immigrants. The authors point out that San Antonio is a minority-majority city of Hispanics who make up a large portion of the city's professionals. The level of socioeconomic disadvantage is not as abject in the south Texas metropolis as in San Diego which is still controlled by a white-led city government. Despite this difference, Martinez et al. (2008) reveal a similar negative relationship between immigration and homicides for both cities from 1995 to 2004.

Providing further evidence against immigration being a consistent characteristic of social disorganization theory is Sampson, Morenoff, and Raudenbush's (2005) study which finds recent Mexican immigrants experience less violent crime than second generation Mexican Americans. Also, second generation immigrants commit less violent crime than third generation Mexican Americans. In addition, Mexican immigrants to Chicago have been shown to commit fewer violent crimes than whites. Sampson, Morenoff, and Raudenbush (2005) show that fewer incidents of community violence can be explained by two parent households, residing in immigrant dominated neighborhoods, and immigrant status. These findings of recent Hispanic immigration violates one of Shaw and McKay's (1942) characteristics of social disorganization; disorganized neighborhoods experience high levels of immigration. Although useful in explaining community delinquency in the early 20th century, social disorganization theory may not be able to account for Hispanic immigration in the early 21st century.

Age and Violent Crime

The relationship between age and crime is one of the most researched areas in criminal justice literature (Sweeten, Piquero, & Steinberg, 2013). The origins of the age-crime phenomenon dates back to Hall's (1904) recognition of youth's propensity over all other age groups to commit deviant acts. Moreover, Shaw and McKay's postulation of social disorganization theory began with examination of juvenile arrest rates in Chicago. In this section, the relationship among age and violent crime will be discussed using a historical perspective of the literature currently available on this topic.

Recent statistics provide a framework from which to explore the connection between young adult males and criminal activity. In 2013, the Bureau of Justice Statistics released a report which found 18 to 24 year-olds had the highest rate of murder from 2002 to 2011. This age group had the largest decline (15.2 per 100,000 in 2002 to 11.9 per 100,000 in 2011) of any age category in the same ten-year period (Bureau of Justice Statistics, 2013). Not surprisingly, the most likely demographic to commit all four violent crimes are males in the 18 to 24 age range (Federal Bureau of Investigation, 2003).

Generally, criminologists agree one of the best factors for predicting crime is age (Hirschi & Gottfredson, 1983). A long history of literature provides a solid foundation for this fact, yet the causational theories of young adult crime vary greatly. One of the earliest studies which focuses on delinquency hypothesizes a fatherless household as a significant reason why young men become offenders (Aichorn, 1935). Largely, these theories are used to explain a breakdown in social structure as causation for delinquency, and later, criminality.

While later research provides evidence to suggest a missing mother or father from the home with a child may be a negligible factor in delinquency (Wootton, 1962), the economic strain from a lack of societal options, and the perception of abundant wealth around him or her, may cause an adolescent to become deviant or criminal (Cloward & Ohlin, 1960). In particular, children from lower socioeconomic backgrounds are more likely to be socialized by older delinquents in their community (Shaw & McKay, 1942), thus filling the gap that is created by a broken home.

While the effect of poverty and social disorganization have been discussed earlier in this paper, Hirschi's and Gottfredson's (1983) study detects all social classes and cultures as more crime-prone in the adolescent or young adult years. While non-white rates of crime are much higher, the peak years for both genders and all ethnicities is consistently in the late teens and early twenties. Their research provides strong evidence for age being an important variable in crime studies. Obviously, not all adolescent delinquents will follow this pattern, however, the majority of offenders tend to follow the trend (Fabio, Li-Chuan, Loeber, & Cohen, 2011).

Fabio et al. (2011) assert crime will peak at age nineteen before declining rapidly, beginning at age twenty-two. Economically average boys demonstrate about half as much criminality as economically disadvantaged boys, however, advantaged boys commit slightly more crimes than average boys. Their analysis suggests disadvantaged boys experience other factors than age which can account for their increased levels of criminality. These findings are important for the simple reason that they show a clear increase in crime for all social classes during the adolescent years of fourteen to twenty-two (Fabio et al., 2011).

Other evidence suggests variations in the age-crime link over time. Blumstein (2001) analyzes murder, robbery, and burglary data using a time-series method in order to detect any change in the age-crime relationship from 1965 to 1992 for criminals aged 18 to 24. His findings show a minor rise in crime for this age group from 1965 to 1970, then a plateau effect until 1985. From 1985 to 1992, the murder, robbery, and burglary rates dramatically increase for 18-year-olds, a slightly lower increase for 20-year-olds, an even lower increase for 22-year-olds, and a negligible increase in crime for 24-year-olds. Blumstein does not provide information for 19, 21, or 23 year olds, however, it can be assumed their criminality lies on the upward trend, also (Blumstein, 2001).

The impact of socialization for youths must be addressed to understand the age-crime relationship. A young person is more likely to start his or her delinquency in areas with high rates of criminality (Sutherland, 1960). As has been demonstrated earlier in this paper, concentrated poverty is correlated to juvenile increases of delinquency (Shaw & McKay, 1942).

However, there are conflicting results as to the impact of age on crime. Messner, Raffalovich, and McMillan (2001) find a negative poverty-murder correlation among youth using time-series UCR data from 1967 to 1999. After controlling for poverty, a rise in unemployment was shown to have a negative effect on youth homicide rates. The authors provide a possible explanation of youth violence may increase as a result of adults being in the workplace during times of criminality (Messner et al., 2001).

Other studies try to provide explanations for the age-crime correlation. For instance, Warr (1993) uncovers a pattern of exposure to deviant adolescents during the teenage years. While Warr does not test social disorganization theory, his assumption that

youth growing up in communities with conflicting value systems will be exposed to older criminal adolescents is consistent with Shaw and McKay. Using National Youth Survey data, the author is able to find young adolescents tend to have minimal peer contact with deviant youths. Interaction with delinquent peers increases into the late teen years until declining again in the early twenties (Warr, 1993).

Thus far, indicators of levels of community social disorganization—homeownership, poverty, race-ethnicity, single-parent families, immigration and age—have been discussed in relation to crime. However, the late 20th century urban phenomenon of planned dispersal of concentrated poverty is not a factor the authors had the opportunity to explore. The next section of the literature review examines research on gentrification's impact on social disorganization.

Gentrification

Social disorganization theory holds that neighborhood instability is an integral part of communities which experience high levels of crime in urban settings. The continual turnover from one impoverished ethnic group to another group in central urban settings is a major reason why these communities do not prosper economically (Shaw & McKay, 1942). However, gentrification of disorganized neighborhoods runs counter to Shaw and McKay's seminal theory. Gentrification is a term first used by Glass (1964) to explain the resurgence of dilapidated residences in London, England in the early 1960s. She defines gentrification, in part as:

> One by one, many of the working-class quarters of London have been invaded by the middle classes- upper and lower. Shabby, modest mews and cottages- two rooms up and two down- have been taken over, when their leases have

> expired…Once this process of "gentrification" starts in a district it goes on rapidly until all or most of the original working class occupiers are displaced and the whole social character of the district is changed (Glass, 1964, xviii).

While gentrification has been noted as early as the 19th century in Europe, the 20th century version has been more methodical and extensive (Smith, 1982). Schaffer and Smith (1986) identify the spatial area that is usually the location of gentrification as Park and Burgess' (1925) zone of transition (i.e. the central business district). This transition is marked by economic recovery, not decline (Schaffer & Smith, 1986).

In the United States by the mid-1970s, approximately 50% of cities with a population of at least 50,000 were encountering some level of recovery in urban housing (Urban Land Institute, 1976). Furthermore, gentrification has been viewed as the mechanism by which inner city decay can be obliterated and replenish the coffers of tax revenue collected in major American cities (Schaffer & Smith, 1986). It should be pointed out that gentrification is associated with negative connotations, as well. The revitalization process, while increasing tax revenue and removing signs of urban decay, has been viewed as a means to subvert poor residents in favor of the affluent and upwardly mobile (Taylor, 1992).

Like many cities since the 1970s, Chicago, Illinois also experienced gentrification. Several communities, including Lincoln Park, Bucktown, and Pilsen have encountered gentrification dating to 1975. Lin (2002) points to Park and Burgess' (1925) rings of concentric circles as influencing the middle and upper classes residential instability into the zone of transition. He notes the proximity of the zone of transition to the central business district where upwardly mobile citizens tend to work. The low

property values in the zone of transition has been an appealing factor for young professionals looking to shorten the commute time to work (Lin, 2002).

Researchers usually assess the level of gentrification by measuring the amount of owner-occupied housing, change in the racial composition of the community, the amount of single-family homes, and the amount increase in property value (Galster, Booza, Cutsinger, Metzger, & Lim, 2005; Lin, 2002; Ley, 1986). It is believed these factors help to capture the revitalization process in urban communities. Another variable used to measure the impact of gentrification is crime (Papachristos, Smith, Scherer, & Fugiero, 2011); does it increase or decrease as more money flows into the neighborhood?

Supporters of gentrification believe the increase in affluent residents will lead to better police protection, social services, connections to institutions, and other conveniences associated with high income communities (McDonald, 1986). However, there is empirical evidence which suggests gentrification may increase crime (Lee, 2010; Van Wilsem, Wittebrood, & De Graaf, 2006). This is consistent with the residential instability component of social disorganization theory as residential instability is an integral part of gentrification. Ultimately, the gentrified community should find balance as more middle and upper class residents move in and more underprivileged residents move out due to rising property values (Kirk & Laub, 2010).

This is consistent with Kreager, Lyons, and Hays' (2011) study of Seattle communities undergoing revitalization. The authors find an initial increase in property crime as gentrification begins, then a decline as the neighborhood proceeds with further gentrification. As a gentrifying community overcomes the initial stage of instability, it will stabilize and increases in social control will reduce crime (Kreager et al., 2011).

Other research points to high crime rates for gentrifying neighborhoods that have high levels of social control, but are surrounded by communities which have low levels of social control. Kirk and Papachristos (2011) examine the historically black Chicago, Illinois community of Bronzeville experiencing high crime rates while simultaneously having great social cohesion. The authors find that black-dominated communities, even the ones with low social disorganization, can be significantly influenced by surrounding black neighborhoods with high social disorganization (Kirk & Papachristos, 2011).

Other authors have found mixed results. Lee (2010) measures the impact of gentrification on crime after the Northridge earthquake near Los Angeles, California in 1994. He identifies increases in robbery and theft from automobiles in low-income neighborhoods experiencing the influx of middle and upper class residents. To the contrary, the same neighborhoods also see declining rates of automobile theft. Moreover, the gentrification of low-income communities did not lead to increases in the aggregate crime rate from 1990 to 2000 (Lee, 2010).

In addition, Wilsem et al. (2006) find higher rates of criminal victimization for residents of Dutch urban gentrifying communities in the years 1994 to 1998. Their study indicates rising rates of "burglary, car-related theft, violence, car vandalism, and other vandalism" (Wilsem et al., 2006, p. 241). The authors note the consistency between the influx of affluent migrants into low-income neighborhoods as reinforcing Shaw and McKay's (1942) residential instability element.

In addition, Atkinson (2000) finds a disruption in social control for communities undergoing gentrification. His study of London neighborhoods in the 1980s uncovers evidence which supports the residential instability component of social disorganization

theory (Shaw & McKay, 1942). This can cause rise in crime for communities which show indicators of socioeconomic improvement (Atkinson, 2000). Yet, as pointed out earlier in this section, an initial increase in crime will eventually decline as the gentrifying process continues and low-income residents are priced out of the neighborhood (Kreager et al., 2011).

Another study by O'Sullivan (2005) measures the affects urban gentrification on crime in Portland, Oregon. In 1990, 50% of the inner city consisted of black-dominated communities. By 2000, no inner city neighborhoods had a black majority and the median property value increased almost three and a half times what it had been ten years earlier. Portland experienced significant crime reductions in the communities which had the highest crime rates in the early 1990s. In addition, these gentrifying neighborhoods transitioned into highly educated, affluent white communities which forced many low-income black residents out due to rising property taxes (O'Sullivan, 2005). Evidently, Shaw and McKay (1942) did not foresee the impact of upwardly mobile residents transitioning into inner city neighborhoods as having a positive effect on crime.

As this author pointed out earlier, the gentrification process of urban residential communities near the central business district is a relatively new social phenomenon that Shaw and McKay did not recognize in the early 20th century. Although gentrification existed dating to the 19th century, it was not until the 1960s that the revitalization of urban communities took on a systematic design, led by investors, to rebuild zones of transition. Researchers are mixed as to the crime reduction benefits. However, affluent residential movement into low-income neighborhoods runs counter to Shaw and McKay's (1942) influential work.

Firearm Homicides in the United States

For 2013, the most recent year data is available, almost 70% of all murders in the United States were committed with a firearm. Since 2009, guns have been the instrument of choice for an average of 8,815 murders per year (Federal Bureau of Investigation, 2014). Until now, this paper has viewed different factors and how they relate to crime. It is now time to look deeper into these variables and how they relate to firearm murder, in particular.

This paper has already documented the link between race-ethnicity and crime, yet it has not examined the impact race-ethnicity has on firearm homicides. In a 2004 study by Murnan, Dake, and Price, race-ethnicity, nor any other variable discussed in this literature review, was predictive of adolescent homicide rates. Their major finding shows firearm availability to be the major correlate to gun murders. This is supported by other academic articles written by researchers Kaplan and Geling (1998) and Miller, Azrael, and Hemenway (2002).

While African-Americans are much more likely to live in poverty (and deal with the other factors associated with it, such as single-parent families, unemployment, etc.), the rate of blacks living in poverty is not proportional to their homicide rates. For example, if 30% of blacks live in poverty and only 10% of whites, data shows blacks do not commit firearm murder at three times the level of whites (O'Flaherty & Sethi, 2010). In contrast, other results suggest race-ethnicity to be predictive of firearm related assaults and homicides (McLaughlin et al., 2000). These findings are corroborated by other etiological articles related to firearms and homicide (Fingerhut & Kleinman, 1990; Tardiff, Marzuk, & Leon, 1994). One study of New York City adolescents found

African-Americans and Hispanics to be twice as likely as whites to be killed by a firearm (Tardiff et al., 1994).

This study has also looked at socio-economic factors like homeownership, low-income housing, and property values. As Shaw and McKay (1942) pointed out, poverty is associated with greater levels of social disorganization. Furthermore, lower socioeconomic conditions are predictors of firearm homicide. A study using gun homicide data from the Centers for Disease Control (CDC) finds poverty to be strongly correlated with gun murders. This is backed up by other studies like McCall, Land, and Cohen (1992) who showed poverty to be a strong predictor of violent crime in general. Theoretically, homicides can be explained, in part, by a person's building frustration at a lack of positive resources from which to legally gain material wealth (Hsieh & Pugh, 1993). While poverty may not explain firearm murders in a rural setting, Shaw and McKay (1942) have provided the theoretical basis for gun homicides in cities like Chicago, Illinois.

As previously stated in the literature review, age appears to be one of the strongest predictors of crime. One would not be surprised to find out that the offender age is highly correlated to gun murders. In fact, a CDC report reviewing homicide data from 1999 through 2007 revealed almost 85% of all murders in the 15 to 24 year age group to be caused by a firearm (Centers for Disease Control and Prevention, 2011). Moreover, from 2006 to 2007 there were 4,166 firearm-related homicides in the 10 to 19 year old age bracket. Another CDC gun murder report finds youth homicides to be higher in cities than metropolitan areas. Furthermore, the same report shows 10 to 19-year-olds to have a higher firearm homicide rate than all other age groups (Centers for Disease Control and

Prevention, 2011). Once again, the evidence supports social disorganization theory's urban-centric crime causation for youth gun murder rates.

It may be impossible to know the true number of personally owned firearms, but a 2011 Gallup poll estimates gun ownership has remained steady since 1997. Roughly 47% of Americans admit to having firearms in their house or on their property (Gallup, 2011). By 2007 estimates, there are approximately 270 million firearms in the United States. It is estimated that citizens of the United States possess the largest amount of privately owned guns of any nation in the world (Graduate Institute of International Studies, 2007).

While Americans possess the greatest amount of firearms, it comes as no surprise that gun legislation is limited. The Brady Handgun Prevention Act, passed during the Clinton administration, was the first federal law to make background checks mandatory as well as banned the sale of assault weapons (large magazine capacity, semi-automatic rifles). However, the assault weapon ban was allowed to sunset ten years after taking effect. More recently, advocates for gun control have argued for greater enhancement of background checks and reinstituting the assault weapon ban. The opposition argues that greater gun control is against the Second Amendment. Furthermore, gun-rights advocates have posited the notion that even if these legislative acts were to take effect, their impact would be negligible in preventing firearm-related homicides (Vizzard, 2015).

While the federal government has come to an impasse over gun legislation, state and local governments have been far more active. In 1976, Washington D.C. functionally eliminated handgun ownership while Chicago followed up with a similar law six years later. Other attempts to restrict firearms have included two propositions in Massachusetts and California. Both were designed to either eliminate private handgun ownership or

freeze the number of handguns in citizens' possession. Both measures were defeated (Vizzard, 2015).

Furthermore, after the recent increase in mass shootings since 2012, federal and state governments have focused on enhancing background checks, limiting high-capacity magazines, and enhancing mental health treatment (Fan, 2015). Perhaps the legislation with the most impact on firearms in the United States has been concealed handgun licensing (CHL). In 1987, the Florida legislature became the first of many governing bodies to pass less restrictive firearm laws in an ongoing trend that has led to over forty states now having statutes allowing some version of firearm carrying for defensive purposes (Phillips et al., 2013; Nagourney, 2014). As the laws have changed, researchers have committed vast amounts of literature in order to understand the crime effects, if any, that have come as a result.

Kwon and Baack (2005) call into question much of the previous research on the guns versus violent crime argument. They take into account the wide variety of firearm legislation in the United States and code twenty-four states based on the strictness of its gun laws. The authors suggest a 3.5 people per 100,000 reductions in gun deaths (homicide, accidental, and suicide) for the 12 most gun-restrictive states. The authors suggest other factors such as the amount of law enforcement personnel, rate of unemployment, and race-ethnicity contribute to higher levels of firearm deaths (Kwon & Baack, 2005). Also, the availability of firearms have been linked to increased rates of gun murder (Dahlberg, Ikeda, & Kresnow, 2004).

Other studies have concluded that handguns have a negligible effect on violent crime. Moody and Marvell (2005) uncover virtually no correlation of gun ownership and

violent crime. The authors argue that criminals may simply use other instruments when firearms are not available in order to complete the crime. Also, criminals and non-criminals arm themselves, and the rate of gun possession among the two groups may off-set any deterrence or crime increase (Moody & Marvell, 2005).

Furthermore, mixed results from peer-reviewed articles seems to add a dilemma to both sides of the firearm legislation argument. A 2004 study by the National Academy of Sciences (NAS) conducted a literature review of the studies which have examined the guns-crime dilemma. The Academy's conclusion comes to no consensus among the many academicians who have studied the gun-crime issue (The National Academy of Sciences, 2004). However, without truly knowing how many people carry guns legally and illegally, an exact causation effect is difficult to establish. Cook (1991) reveals the strong limitations of correlating firearms and violent crime since there is no way of knowing exactly how many guns exist in the United States.

While numerous studies have explored the impact of gun legislation on violent crime, fewer studies have explored how the impact of gun legislation differs by community levels of social disorganization. In this study, the author examines the impact of the Chicago firearm ban on murders with a firearm between 1971 and 1993, and if this ban had different effects by level of community disorganization.

Chapter Four

Methodology

The literature pertaining to relaxed firearm policies is mixed. Lott and Mustard (1997) contend a correlation between the introduction of concealed handgun legislation and the crime reductions of the 1990s. However, Moody and Marvell (2005) find no correlation between gun ownership and violent crime. Furthermore, a 2004 study by the National Academy of Sciences finds no conclusive evidence that handgun legislation either increases or decreases violent crime. Adding to the inconclusive literature on firearm legislation, there is no accurate account for how many guns are privately owned in the United States (Smith, Laken, & Son, 2014).

While several studies have explored the impact of gun legislation on violent crime, fewer studies have explored how the impact of gun legislation differs by community levels of social disorganization. Shaw and McKay (1942), however, postulate that poverty, ethnic heterogeneity, and neighborhood instability are three tenets which lead to criminality. More precisely, concentrated levels of urban poverty are linked with violent crime. Several studies in the literature review point out the strong correlation to increased rates of violent crime in poor urban communities (Almgren, Guest, Immerwahr, & Spittel, 1998; Krivo & Peterson, 2000).

This thesis also examines Shaw and McKay's residential instability component in the form of neighborhood gentrification. Federal and local government entities have promoted gentrification policies in the form of subsidized housing in order to decrease the levels of concentrated poverty. Studies have confirmed the link between middle and upper-income residents moving into poor communities and increases in crime (Kirk &

Laub, 2010; Kreager et al., 2011). However, the initial rise in crime is replaced by long-term reductions (Kreager et al., 2011). This thesis seeks to fill the literature gap by analyzing gentrification's impact on firearm murders. Other community area types will also be analyzed in order to measure the impact different levels of social disorganization have on gun homicides.

Voorhees Center: Interpreting Neighborhood Change in Chicago

For this thesis, the author tests Shaw and McKay's (1942) social disorganization theory using the nine community types as specified by the Voorhees Center for Neighborhood and Community Improvement. The Voorhees Center used Census data from 1970, 1980, 1990, and 2000 to measure trends in community areas, including changes in percentage share of white, black, and Hispanic populations, percentage of children, percentage of the community with a 4-year college education, median family income, percentage of owner-occupied housing, percentage of families living below the poverty line, percentage of the community's workforce in managerial or professional positions, percentage of single-parent, female-led households, and percentage of private schools for each of the 77 communities in Chicago, Illinois.

The Voorhees authors created an index to more readily identify early warning signs of decline and initiate interventions before poverty and disorganization are entrenched within communities. If a factor, for example poverty, is shown to be lower in a community than in the city as a whole, then that community will be scored as +1 for that factor. Likewise, if a community has a higher poverty rate than the rest of Chicago, then the community receives a -1 for the factor. This allows for a maximum score of +13 or a minimum score of -13.

The closer a score is to 13, the more stable the community area is and, conversely, the closer a score is to -13, the less stable it is. For this study, the author interpret these scores as indicators of neighborhood social disorganization. Stable communities are more likely to have higher scores based on the fact these neighborhoods will have below average ratings for factors which are more likely to be associated with social disorganization (i.e., poverty, single-parent families, low-rates of homeownership, etc.). Communities on the decline are more likely to have lower scores based on factors such as percentage of citizens with a college education, median age, and managerial/professional employment. Furthermore, high social disorganization communities are more likely to have the lowest scores due to the entrenched sociological factors of poverty, crime, and lack of education. Lastly, gentrifying neighborhoods are more likely to show higher scores for factors related to stability and lower scores for factors related to disorganization. Table 4.1 lists the 77 Chicago communities aggregated into the nine community area types as specified by the Voorhees study.

Hypotheses

Shaw and McKay's (1942) research will be tested using the nine community types as specified by the Voorhees Center for Neighborhood and Community Improvement. As stated earlier, this thesis has two objectives. Did firearm murders (compared to murders with other types of weapons) in the eleven years after the 1982 firearm ban in Chicago decrease compared to the eleven years prior to the ban? Also, what effects did community-area types have on the firearm murder rate after the ban as compared to before the ban? The author offers the following hypotheses based on the prior literature discussed in this paper.

Table 4.1 Voorhees Center Community Types, Descriptions, and Corresponding Community Areas

Community Types	Description	Community Areas
Stable Upper	Overall average score of +7.5 or more	West Ridge, Edison Park, Norwood Park, Forest Glen, North Park, Beverly, Mount Greenwood, O'Hare, Edgewater
Stable Middle	Overall average score of +1 to +7.4	Jefferson Park, Portage Park, Irving Park, Dunning, Mont Clare, Calumet Heights, Hegewisch, Garfield Ridge, Archer Heights, McKinley Park, Clearing, Morgan Park
Poverty	Overall average score -1 to -7.4	Lower West Side, Douglas
Extreme Poverty	Overall average score of -7.5 or less	West Garfield Park, East Garfield Park, North Lawndale, Oakland, Fuller Park, Grand Boulevard, Washington Park, Woodlawn, Riverdale, West Englewood, Englewood, Greater Grand Crossing
Positive Change	Overall average score of +4 or more	Armour Square, Bridgeport
Positive Change Gentrification	Overall average score of +4 or more with gentrification	Uptown, Lincoln Square, North Center, Lakeview, Lincoln Park, Near North Side, Logan Square, West Town, Near West Side, Loop, Near South Side, Kenwood
Mild Decline	Overall decline of 4 points in 10 years, change of less than 4 in other decades	Albany Park, Belmont Cragin, Hermosa, South Lawndale, Hyde Park, Brighton Park, Burnside, Roseland, Washington Heights, West Elsdon
Moderate Decline	Overall decline of 5 or 6 points in 10 years, decline of less than 4 points in other decades	Rogers Park, Humboldt Park, West Lawn, Pullman, Ashburn
Serious Decline	Overall decline of 7 or more points in 10 years, or 2 or more decades with decline of 4 or more points	Avondale, Austin, South Shore, Chatham, Avalon Park, South Chicago, South Deering, East Side, West Pullman, New City, Gage Park, Chicago Lawn, Auburn Gresham

H_1: The firearm murder rate in the eleven years prior to the Chicago, Illinois firearm ban will be lower than the gun murder rate in the eleven years after the ban.

H_2 : Community areas characterized by gentrification will be positively associated with firearm murders after the ban when compared to low social disorganization communities (i.e., stable upper class and stable middle class).

H_3 : Gentrified community areas will be negatively associated with firearm homicides after the ban when compared to high social disorganization communities (i.e., poverty and extreme poverty).

H_4 : Gentrified community areas will be negatively associated with firearm murders after the ban when compared to declining communities (i.e., mild decline, moderate decline, and serious decline).

$\mathbf{H_5}$: Community areas characterized as gentrifying will be positively associated with firearm murders after the ban when compared to the positive change communities.

Data

The data for this thesis come from Block and Block's (2001) Homicides in Chicago study from 1965-1995. The scope of this thesis will only pertain to the years 1971 to 1993 in order to provide an even number of years for analysis; eleven years of data prior to the firearm ban and eleven years of data after the ban was implemented. The year 1982 is excluded due to the gun policy implementation mid-year. The Homicides in Chicago study seeks to analyze the factors which may lead to murder. All data were obtained by Block and Block with the close cooperation of the Chicago Police Department. Homicide data, with the exception of those deemed in self-defense, are included in the dataset. A Murder Analysis Report (MAR) was conducted for each

murder. The MAR asked for specific information related to the homicide, such as causation, age, race-ethnicity, gender, or address of the murder (Block & Block, 2001).

One caveat to the MAR is its completion by Chicago Police detectives whom operated under the burden of proof to charge an offender with a crime as 'preponderance of the evidence'. The data for any crime where the police burden of proof is met, even if there is no conviction, are included. When the values of "missing" or "unknown" appear, either the information is not known to the Chicago Police Department or the value is not relevant to the homicide data (Block & Block, 2001). Other gaps in the CPD data had to be filled by the authors. For instance, after 1981, the Chicago Police Department code the location of each homicide to make it compatible with its computer system when data began to be stored digitally in the early 1980s. For the years 1965 to 1981, Block and Block had to physically recode each murder to match the coding used by the CPD computer network in order to match the data post-1981.

Analysis Strategy

This research consists of modeling two separate outcomes. In the first set of models, the author regresses murder with a firearm on time, community area types, and the control variables (i.e., age, race-ethnicity, and gender of victims and first offenders). The variable "firearm" is coded 1 for all murders involving a firearm and 0 for homicides involving another type of weapon. Parameter estimates (β) will be presented as odds ratios and interpreted as the percent change in the likelihood of murder with a firearm, holding other variables constant, represented by the equation below:

$$100x(exp(\beta)-1)$$

Robust standard estimates will be computed using STATA (13.0).

Odds ratios are chosen over other statistical modeling due to the predictability of measuring the effect of "X" on "Y". Other models do not allow for a constant effect of the independent variable on the dependent variable. The odds ratios are a useful way of showing an association between an exposure and an outcome. They are also a beneficial way of representing the likeliness of an outcome given the exposure or lack of exposure to it (Szumilas, 2010). In the second set of models, logistic regression will be used to regress firearm murders post-policy implementation (compared to firearm murders committed prior to the ban) on community area types and the control variables. The variable "Time Period of Firearm Murders" is coded 1 for murders committed with a firearm after the firearm ban and 0 for murders committed with a firearm in the ten years prior to the ban. Parameter estimates will be presented as odds ratios and interpreted as the percent change in the likelihood of murder with a firearm after the gun ban.

Measures

Firearm. Firearm is a dummy variable coded 1 for all murders involving a firearm (i.e., "Automatic", "Handgun non-auto", "Rifle non-auto", "Shotgun non-auto", and "Firearm-type unknown"). Homicides that did involve a firearm are coded 0. Of the 17,727 murders committed in Chicago from 1971 to 1993, excluding 1982, 64.3% included the use of a firearm.

Time. Time has been recoded for the years 1971 to 1993. The years 1965 to 1970, 1982, 1994, and 1995 have been excluded from the analysis. Murders committed during the time period from 1971 to 1981 are coded 0. Murders committed between 1983 and 1993 are coded 1. Of the 17,727 murders committed during this time period, 48.1% occurred in the 11 years after the firearm ban.

Community Area Types. Chicago's 77 communities have been recoded into 9 groups according to the Voorhees Center typology: stable upper-class, stable middle-class, poverty, extreme poverty, mild decline, moderate decline, severe decline, positive change, and gentrification. Each one of these community areas is represented by a dummy variable, with gentrified communities serving as the comparison group.

Frequency distributions were computed, showing the percentage of homicides committed in each community area during the time period of interest. Extreme poverty community areas account for the highest proportion of murders during this time period, 33.6%. Gentrifying neighborhoods account for the second highest proportion of murders, 23.9%. Interestingly, neighborhoods experiencing positive change account for a smaller percentage of murders during this time period (0.6%) than stable upper-class community areas (1.9%).

Control Variables. For this study, the author controls for gender and race-ethnicity of the victim and offender. Below, Table 4.2 shows the minimum values, maximum values, and mean for each variable. A series of dummy variables was created for "male victim," "black victim," "Latino victim," "other victim," "white male offender", "black male offender," "Hispanic male offender," "unknown race-ethnicity male," "white female offender," "black female offender," "Hispanic female offender," "female offender unknown," and "offender sex-age-race-ethnicity missing". Male victim is the reference category, coded 0 and consists of 82% of the murder sample. White victims comprise 15% of Chicago homicides. Black victims constitute 71% of all murder victims in the years under investigation.

Table 4.2 Descriptive Statistics for Study 1 – Chicago Homicides from 1971 to 1993 (N= 17,727)

	Minimum	Maximum	Mean
Firearm (ref. = non-firearm)	0	1	.643
Time of Murder (ref. = 1971-1981)	0	1	.481
Gender of Victim			
Male	0	1	.818
Race-ethnicity of Victim			
White (ref.)	0	1	.146
Black	0	1	.705
Hispanic	0	1	.138
Other	0	1	.010
Victim Age			
0 to 24 (ref.)	0	1	.367
25 to 34	0	1	.288
35 to 44	0	1	.154
45 to 54	0	1	.089
55 to 64	0	1	.056
65 to 74	0	1	.026
75 Plus	0	1	.019
Race-ethnicity & Gender of Offender			
White Male (ref.)	0	1	.069
Black Male	0	1	.537
Hispanic Male	0	1	.109
Unknown Race-ethnicity Male	0	1	.009
White Female	0	1	.006
Black Female	0	1	.090
Hispanic Female	0	1	.003
Unknown Race-ethnicity Female	0	1	.001
Offender Sex, Race-ethnicity, Age Missing	0	1	.176
Offender Age			
5 to 24 (ref.)	0	1	.386
25 to 34	0	1	.236
35 to 44	0	1	.105
45 to 54	0	1	.048
55 to 64	0	1	.018
65 to 74	0	1	.007
75 Plus	0	1	.002
Offender's Age Missing	0	1	.021
Community Area Types			
Stable Upper	0	1	.020
Stable Middle	0	1	.025
Stable Poverty	0	1	.050
Extreme Poverty	0	1	.336
Mild Decline	0	1	.080

Table 4.2 Descriptive Statistics for Study 1 – Chicago Homicides from 1971 to 1993 Continued.

Community Area Types	Minimum	Maximum	Mean
Moderate Decline	0	1	.049
Severe Decline	0	1	.200
Positive Change	0	1	.006
Gentrification (ref.)	0	1	.239

Hispanic victims make up 14%, and other victims are 1% of the total. In addition, white male offenders are 7%, black male offenders represent 54%, Latino male offenders represent 11%, and unknown race-ethnicity male offenders make up 1% of the total for study 1. Furthermore, white female offenders are 0.6%, black female offenders are 9%, Latina female offenders consist of 0.3%, and unknown race-ethnicity female is 0.1% of the sample in the first set of analyses. Offender sex-race-age missing is a large segment at 18% and has the possibility to skew the race-ethnicity and gender results.

In this study, the author also controls for age of the victim and offender. This variable was originally coded in five year increments ranging from "under 5 years" to "85 years and over." The researcher created a dummy variable for victim age, coded 1 for victims ages "0 to 24" and 0 for all other age categories. Victims between 0 to 24 make up 37% of Chicago homicides from 1971 to 1993. Those in the 25 to 34 category comprise 29%, 35 to 44 consist of 15%, 45 to 54 make up 9%, 55 to 64 comprise 6%, 65 to 74 consist of 3%, and 75+ account for 2% of homicide victims from study 1. Offenders in the 0 to 24 age category make up 39% of the sample, 25 to 34 consist of 24%, offenders 35 to 44 comprise 11%, 45 to 54 make up 5%, 55 to 64 are 2%, 65 to 74 are 1%, and 75+ consist of 0.2% of the sample.

The last category of community area type reveals results consistent with Shaw and McKay's social disorganization theory. Two categories in the typology, severe decline and gentrification, account for 20% and 24% of murders from 1971 to 1993. However, communities in extreme poverty represent 34% of the locations where the 17,727 Chicago homicides occurred during this time span. The severely declining and gentrifying neighborhoods, by definition, are in transition and have relatively high levels of poverty.

Below, Table 4.3 shows the minimum and maximum values and means for variables in the second set of analyses. The coding for the second set of analyses follows the same coding as the first study with control variables for race-ethnicity, gender, and age for victims and offenders. Also, Chicago community area typology remains the same as Table 4.2 In addition, a variable measuring firearm homicides in the city has been added to this set of analyses. This variable measures only those murders committed with a firearm between 1971 and 1982 and between 1983 and 1993. It is coded 1 for murders committed with a firearm after the firearm ban and 0 for murders committed with a firearm between 1971 and 1982. Of the 11, 422 murders committed with a firearm during this time period, 47.2% occurred between 1983 and 1993. During the study period, 47% of firearm murders were committed after the ban.

Table 4.3 Descriptive Statistics for Study 2 – Firearm Murders During Years of Analysis (N= 11,397)

	Minimum	**Maximum**	**Mean**
Murder Committed with Firearm after Ban	0	1	.472
Gender of Victim			
Male Victim	0	1	.879
Race-ethnicity of Victim			
White	0	1	.112
Black	0	1	.724

Table 4.3 Descriptive Statistics for Study 2 – Firearm Murders During Years of Analysis Continued.

	Minimum	Maximum	Mean
Hispanic	0	1	.155
Other	0	1	.008
Victim Age			
0 to 24	0	1	.409
25 to 34	0	1	.306
35 to 44	0	1	.145
45 to 54	0	1	.075
55 to 64	0	1	.044
65 to 74	0	1	.016
75 Plus	0	1	.005
Race-ethnicity & Gender of Offender			
White Male	0	1	.052
Black Male	0	1	.573
Hispanic Male	0	1	.121
Unknown Race-ethnicity Male	0	1	.008
White Female	0	1	.004
Black Female	0	1	.054
Hispanic Female	0	1	.002
Unknown Race-ethnicity Female	0	1	.001
Offender Sex, Race-ethnicity, Age Missing	0	1	.186
Offender Age	0	1	
5 to 24	0	1	.415
25 to 34	0	1	.210
35 to 44	0	1	.090
45 to 54	0	1	.043
55 to 64	0	1	.019
65 to 74	0	1	.009
75 Plus	0	1	.002
Offender's Age Missing	0	1	.026
Community Area Types			
Stable Upper	0	1	.014
Stable Middle	0	1	.025
Stable Poverty	0	1	.048
Extreme Poverty	0	1	.347
Declining			
Mild Decline	0	1	.085
Moderate Decline	0	1	.052
Severe Decline	0	1	.206
Positive Change	0	1	.005
Gentrification	0	1	.218

Males represent 88% of all firearm murder victims from 1971 to 1993. Furthermore, black victims represent 72% of the sample and Hispanics comprise 16% of the 11,397 gun murder victims. White male offenders account for 5% of sample, while black male offenders make up a majority with 57% of the city's firearm homicide suspects. In addition, Hispanic male offenders represent 12% and unknown race-ethnicity male is 0.8%. White female offenders make up 0.4%, black female offenders comprise 5%, and Hispanic females represent 0.2% of the gun murder offenders from 1971 to 1993. Unknown female offenders consist of just 0.1%, however, offender sex-race-age missing represents almost one-fifth of the sample with 19% firearm homicides.

Once again, age appears to be a major correlating factor for Chicago murder victims. Homicide victims ranging from 0 to 24 years of age represent 41% of firearm murder victims.The aging-out process appears to be recurrent with a decrease to 31% of firearm homicide victims in the 25 to 34 age range. Each subsequent age group decreases, with 35 to 44 accounting for 15%, 45 to 54 at 8%, 55 to 64 consisting of 4%, 65 to 74 comprising 2%, and 75+ making up 0.5% of the firearm murder victim sample.

Gun murder offenders in Chicago during the same time span show similar results. Offenders from ages 5 to 24 represent 42% of the sample, while 25 to 34 account for 21%. Again, the aging-out process appears to be in effect. Those from 35 to 44 are 9%, 45 to 54 consist of 4%, 55 to 64 comprise 2%, 65 to 74 represent 0.9%, and 75+ are 0.2% of the firearm murder offender sample. A small portion of 3% of gun homicide offender's ages are missing.

The community area typologies of extreme poverty, severe decline, and gentrification again account for a vast majority of firearm homicides in Chicago. From

1971 to 1993 over three-fourths of gun murders occurred in these neighborhoods. The percentage of overall homicides (78%) is essentially the same rates for firearm murders in extreme poverty, severe declining, and gentrifying communities (78%).

These findings are consistent with the literature review. By noting the impact race-ethnicity, age, gender, and socioeconomic factors which are discussed, this thesis has added to the body of knowledge of major crime correlates. However, this author's first hypothesis was proven inaccurate by the lower rate of firearm murder post-1982 ban as opposed to before the ban.

Chapter Five

Results

Bivariate Relationships

Table 5.1 consists of bivariate correlations for all variables in the first set of analyses. Bivariate relationships are important for understanding the strength of relationships and statistical significance among the variables in this study. Judgments concerning significance are based on the .05 level. A significant and negative correlation is found between time and firearm murders (r = -.026). Murders using a firearm were more likely to occur in the ten years before the ban than the ten years after.

Moreover, community area type appears to be correlated and reach statistical significance with firearm murders in eight out of nine categories. Stable upper,(r = -.053) positive change (r = -.025), and gentrification (r = -.066) all have weak negative relationships with firearm murders. This suggests a decline in Chicago gun homicides in these areas over the twenty-two year duration of the study. However, poverty (r = .021), extreme poverty (r = .031), mild decline (r = .025), moderate decline (r = .020), and severe decline (r = .020) all have weak positive correlations with firearm murder in Chicago. The negative relationships show an increase in firearm homicide for these five community area types.

Each victim race-ethnicity category is statistically significant with firearm murders, however, the direction of association is varied. Male victims (r = .212) are positively, yet weakly associated with firearm homicides. White victims (r = -.129) demonstrate a weak negative relationship, but black (r = .057) and Hispanic (r =.067) victims both have weak positive correlations to Chicago firearm homicides. These

findings suggest a possible socio-economic impact of race-ethnicity and community area type.

Not surprisingly, the victim age categories of 0 to 24 (r = .117) and 25 to 34 (r = .053) have weak positive relationships with gun murders in the city. Victim age 35 to 44 (r = -.033), victim age 45 to 54 (r = -.069), victim age 55 to 64 (r =-.068), victim age 65 to 74 (r = -.088), and victim age 75+ (r = -.134) each have weak negative associations with firearm murders during the twenty-two years of this study.

Race-ethnicity of offender suggests mixed results for Chicago gun homicides from 1971 to 1993. White male offenders (r = -.090) and male offenders unknown race (r = -.003) have weak negative correlations with firearm murders. However, only white male offenders are statistically significant. Hispanic male offenders (r = .052) have a weak positive relationship, while black maleoffenders (r = .098) reach statistical significance with a p-value of .000. Offender age has a weak positive relationship with firearm in only three categories, 0 to 24 (r = .080), 65 to 74 (r = .020), and 75+ (r = .016). All other age categories have weak negative correlations with firearm and reach statistical significance in every age group with the exception of 55 to 64 (p = .753). As being consistent with the age-crime literature, the youngest age category has a stronger relationship to firearm homicides than any other ages used for this study.

In Table 5.1, statistical significance is reached for only five out of nine community area types when correlated with time in Chicago. This includes extreme poverty (r = .047), mild decline (r = .020), moderate decline (r =.068) severe decline (r = .075), and gentrification neighborhoods (r = -.064). Extreme poverty and gentrification

CATs each have weak negative correlations with time. However, Mild decline, moderate decline, and severe decline CATs have weak positive relationships with time.

As for male victims, they experienced a weak positive relationship with time in Chicago from 1971 to 1993 ($r = .017$, $p = .024$). White victims suggest a weak negative relationship with time as expressed with a Pearson's R-value of -.086 and a p-value of .000. Black and Hispanic victims show weak positive relationships with time and both reach statistical significance. All but three victim age categories achieve statistical significance The only category to show a positive relationship to time is those in the 0 to 24 group ($r = .051$).

For the various offender variables, the bivariate correlations demonstrate mixed results. White male offenders show a weak negative, statistically significant relationship with time. Furthermore, black male offenders also show a weak negative correlation with time. The only race-ethnicity variable which suggests a positive relationship with time is Hispanic offenders ($r = .005$). "Offender sex/race/age missing" has a weak positive association to time and is statistically significant.

Offender age suggests correlation with time in several categories. Those in the 0 to 24 group have a weak positive relationship with time with a Pearson's R-value of .016 and statistical significance. Three other age categories, 25 to 43, 45 to 54, and 55 to 64 each show weak negative, statistically significant correlations with time.

Table 5.1. Correlation Matrix for Use of Firearm (One-tailed Significance Test; Standard Errors are Below the Correlation Coefficients)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(1) Firearm	1.000													
(2) Time	-.026	1.000												
	.001													
(3) Male Victim	.212	.017	1.000											
	.000	.024												
(4) White Victim	-.129	-.086	-.081	1.000										
	.000	.000	.000											
(5) Black Victim	.057	.046	-.002	-.640	1.000									
	.000	.000	.754	.000										
(6) Hispanic Victim	.067	.028	.093	-.166	-.619	1.000								
	.000	.000	.000	.000	.000									
(7) Other Victim	-.032	-.002	-.024	-.042	-.158	-.041	1.000							
	.000	.761	.001	.000	.000	.000								
(8) Victim Age 0 to 24	.117	.051	.011	-.116	.029	.090	-.031	1.000						
	.000	.000	.157	.000	.000	.000	.000							
(9) Victim Age 25 to 34	.053	.014	.022	-.065	.040	.010	.013	-.484	1.000					
	.000	.067	.003	.000	.000	.183	.089	.000						
(10) Victim Age 35 to 44	-.033	-.003	.000	.006	.006	-.021	.023	-.325	-.271	1.000				
	.000	.694	.953	.420	.419	.006	.002	.000	.000					
(11) Victim Age 45 to 54	-.069	-.059	.012	.069	-.023	-.045	.017	-.238	-.199	-.133	1.000			
	.000	.000	.105	.000	.002	.000	.023	.000	.000	.000				
(12) Victim Age 55 to 64	-.068	-.044	.009	.121	-.049	-.056	-.008	-.185	-.155	-.104	-.076	1.000		
	.000	.000	.210	.000	.000	.000	.297	.000	.000	.000	.000			
(13) Victim Age 65 to 74	-.088	-.020	-.036	.096	-.034	-.051	-.006	-.124	-.104	-.070	-.051	-.040	1.000	
	.000	.007	.000	.000	.000	.000	.412	.000	.000	.000	.000	.000		
(14) Victim Age 75+	-.134	.005	-.109	.138	-.067	-.050	-.006	-.106	-.089	-.060	-.044	-.034	-.023	1.000
	.000	.482	.000	.000	.000	.000	.413	.000	.000	.000	.000	.000	.002	

Table 5.1 Correlation Matrix for Use of Firearm Continued.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(15) White Male Offender	-.090	-.049	-.060	.472	-.371	.003	.019	-.034	-.027	.012	.029	.035	.017
	.000	.000	.000	.000	.000	.739	.013	.000	.000	.110	.035	.000	.021
(16) Black Male Offender	.098	-.043	-.020	-.239	.472	-.361	-.056	.038	.011	-.024	-.021	-.010	-.015
	.000	.000	.008	.000	.000	.000	.000	.000	.126	.001	.006	.205	.053
(17) Hispanic Male Offender	.052	.005	.068	.018	-.484	.621	.005	.093	.000	-.031	-.048	-.037	-.036
	.000	.548	.000	.018	.000	.000	.466	.000	.974	.000	.000	.000	.000
(18) Male Offender Unknown Race	-.003	-.003	-.004	.018	-.080	.012	.256	-.012	.011	.016	-.014	-.001	.008
	.688	.671	.641	.014	.000	.106	.000	.124	.151	.034	.059	.847	.302
(19) White Female Offender	-.048	-.023	-.017	.138	-.096	-.018	.013	-.018	-.014	.004	.034	.005	.000
	.000	.002	.027	.000	.000	.016	.093	.018	.061	.555	.000	.520	.996
(20) Black Female Offender	-.168	-.020	.013	-.090	.163	-.114	-.030	-.067	-.009	.047	.042	.013	.012
	.000	.009	.087	.000	.000	.000	.000	.000	.250	.000	.000	.084	.113
(21) Hispanic Female Offender	-.026	.018	-.002	.007	-.074	.107	-.005	.003	.015	-.011	-.002	-.008	-.009
	.001	.018	.788	.330	.000	.000	.465	.708	.050	.134	.789	.259	.243
(22) Female Offender Unknown Race	-.033	-.016	-.001	-.003	-.037	-.003	.186	-.008	-.008	.008	.009	.004	-.006
	.000	.030	.887	.657	.000	.736	.000	.301	.283	.279	.246	.640	.404
(23) Offender Sex/Race/Age Missing	.033	.105	.006	.021	-.043	.035	-.003	-.046	.009	.010	.011	.010	.028
	.000	.000	.449	.004	.000	.000	.657	.000	.245	.189	.138	.187	.000
(24) Offender Age 0 to 24	.080	-.016	.081	-.032	-.011	.047	.005	.274	-.103	-.126	-.071	-.053	-.031
	.000	.035	.000	.000	.141	.000	.504	.000	.000	.000	.000	.000	.000
(25) Offender Age 25 to 34	-.082	-.018	-.029	-.119	.043	-.036	-.006	-.085	.130	-.001	-.019	-.023	-.018
	.000	.020	.000	.013	.000	.000	.457	.000	.000	.932	.013	.002	.015
(26) Offender Age 35 to 44	-.065	-.005	-.055	.018	-.001	-.021	.012	-.127	.015	.126	.028	.010	-.007
	.000	.466	.000	.016	.920	.005	.100	.000	.048	.000	.000	.165	.323
(27) Offender Age 45 to 54	-.028	-.038	-.043	.023	.014	-.039	-.007	-.100	-.030	.064	.088	.046	.012
	.000	.000	.000	.003	.066	.000	.339	.000	.000	.000	.000	.000	.123

Table 5.1 Correlation Matrix for Use of Firearm Continued.

	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
(15) White Male Offender	.038 .000	1.000												
(16) Black Male Offender	-.024 .001	-.292 .000	1.000											
(17) Hispanic Male Offender	-.038 .000	-.095 .000	-.376 .000	1.000										
(18) Male Offender Unknown Race	-.013 .082	-.025 .001	-.100 .000	-.033 .000	1.000									
(19) White Female Offender	.019 .010	-.022 .003	-.087 .000	-.028 .000	-.008 .315	1.000								
(20) Black Female Offender	.018 .017	-.085 .000	-.338 .000	-.110 .000	-.029 .000	-.025 .001	1.000							
(21) Hispanic Female Offender	.000 .982	-.015 .052	-.058 .000	-.019 .012	-.005 .505	-.004 .563	-.017 .025	1.000						
(22) Female Offender Unknown Race	.016 .032	-.010 .166	-.041 .000	-.013 .074	-.004 .634	-.003 .680	-.012 .109	-.002 .784	1.000					
(23) Offender Sex/Race/Age Missing	.022 .004	-.126 .000	-.498 .000	-.162 .000	-.043 .000	-.037 .000	-.145 .000	-.025 .001	-.018 .018	1.000				
(24) Offender Age 0 to 24	-.010 .170	-.018 .018	.229 .000	.131 .000	-.033 .000	-.005 .516	-.027 .000	.020 .007	-.012 .104	-.367 .000	1.000			
(25) Offender Age 25 to 34	-.025 .001	.030 .000	.125 .000	.013 .075	-.015 .052	.005 .535	.085 .000	.005 .521	.017 .025	-.257 .000	-.441 .000	1.000		
(26) Offender Age 35 to 44	.003 .683	.068 .000	.036 .000	.007 .343	.002 .806	.025 .001	.073 .000	-.005 .535	.006 .417	-.159 .000	-.272 .000	-.191 .000	1.000	
(27) Offender Age 45 to 54	.007 .335	.062 .000	.021 .004	-.017 .022	-.012 .101	.035 .000	.058 .000	.008 .304	-.002 .824	-.104 .000	-.178 .000	-.125 .000	-.077 .000	1.000

Table 5.1 Correlation Matrix for Use of Firearm Continued.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(28) Offender Age 55 to 64	.002	-.023	-.030	.015	.020	-.041	-.001	-.074	-.017	.006	.056	.077	.036	.009
	.753	.003	.000	.045	.008	.000	.848	.000	.024	.431	.000	.000	.000	.255
(29) Offender Age 65 to 74	.020	-.009	-.010	-.009	.026	-.024	-.002	-.048	-.026	.019	.020	.052	.057	.012
	.006	.242	.185	.237	.001	.001	.778	.000	.000	.012	.007	.000	.000	.100
(30) Offender Age 75+	.016	.003	-.044	.023	-.007	-.013	-.004	-.022	-.027	.003	.009	.026	.070	.040
	.035	.695	.000	.002	.386	.072	.557	.003	.000	.659	.208	.001	.000	.000
(31) Offender Age Missing	.046	-.079	.025	.019	-.026	.016	-.003	-.028	-.006	.021	.010	.021	.010	-.003
	.000	.000	.001	.011	.001	.032	.653	.000	.430	.005	.164	.006	.164	..650
(32) Stable Upper	-.053	.000	-.043	.156	-.125	-.004	.030	-.033	.005	-.009	.005	.012	.018	.070
	.000	.999	.000	.000	.000	.564	.000	.000	.487	.219	.533	.111	.016	.000
(33) Stable Middle	-.005	.003	-.013	.138	-.096	-.014	-.002	-.003	-.006	-.013	.017	.005	.008	.009
	.500	.672	.081	.000	.000	.058	.774	.717	.442	.091	.025	.518	.305	.228
(34) Poverty	.021	-.002	.026	-.050	-.069	.148	-.017	.019	.003	-.007	-.005	-.010	-.015	-.014
	.006	.773	.001	.000	.000	.000	.026	.011	.684	.384	.533	.182	.047	.055
(35) Extreme Poverty	.031	-.047	.011	-.243	.404	-.267	-.060	-.032	0.16	.010	.012	-.003	.012	.002
	.000	.000	.128	.000	.000	.000	.000	.000	.031	.190	.102	.691	.109	.841
(36) Mild Decline	.025	.020	.001	.037	-.135	.137	.009	.036	-.030	.000	-.007	-.010	-.003	.001
	.001	.009	.843	.000	.000	.000	.241	.000	.000	.976	.336	.203	.721	.893
(37) Moderate Decline	.020	.068	.002	.026	-.099	.100	.013	.049	-.019	-.006	-.019	-.022	-.016	.003
	.008	.000	.826	.001	.000	.000	.082	.000	.013	.406	.013	.003	.037	.728
(38) Severe Decline	.020	.075	-.010	-.048	.107	-.082	-.034	.015	.010	-.008	-.009	-.008	-.004	-.024
	.007	.000	.196	.000	.000	.000	.000	.039	.191	.269	.207	.303	.554	.002
(39) Positive Change	-.025	-.008	-.021	.059	-.069	.019	.041	.013	-.015	-.013	.002	.008	.018	-.001
	.001	.311	.005	.000	.000	.010	.000	.094	.048	.094	.757	.269	.016	.908
(40) Gentrification	-.066	-.064	.005	.190	-.289	.166	.078	-.027	.003	.013	.003	.025	-.004	.000
	.000	.000	.530	.000	.000	.000	.000	.000	.699	.082	.647	.001	.562	.969

Table 5.1 Correlation Matrix for Use of Firearm Continued.

	(29)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)
(29) Offender Age 65 to 74	1.000													
(30) Offender Age 75+	-.004 .624	1.000												
(31) Offender Age Missing	-.013 .095	-.006 .398	1.000											
(32) Stable Upper	.002 .744	.013 .087	-.012 .104	1.000										
(33) Stable Middle	.003 .659	.001 .850	-.001 .885	-.023 .003	1.000									
(34) Poverty	-.009 .239	.003 .663	.004 .586	-.031 .000	-.035 .000	1.000								
(35) Extreme Poverty	.032 .000	.005 .481	.000 .997	-.100 .000	-.114 .000	-.154 .000	1.000							
(36) Mild Decline	-.006 .455	-.013 .089	.000 .978	-.042 .000	-.047 .000	-.064 .000	-.210 .000	1.000						
(37) Moderate Decline	-.010 .180	-.004 .620	.001 .873	-.032 .000	-.036 .000	-.049 .000	-.161 .000	-.067 .000	1.000					
(38) Severe Decline	-.016 .034	-.002 .798	-.008 .306	-.070 .000	-.080 .000	-.108 .000	-.355 .000	-.148 .000	-.113 .000	1.000				
(39) Positive Change	.002 .837	.013 .084	-.002 .798	-.011 .133	-.013 .087	-.017 .021	-.057 .000	-.024 .002	-.018 .016	-.040 .000	1.000			
(40) Gentrification	-.010 .169	-.003 .716	.009 .206	-.079 .000	-.090 .000	-.122 .000	-.399 .000	-.166 .000	-.127 .000	-.280 .000	-.045 .000	1.000		

Table 5.2 regresses firearm murders on time, community area type, and the victim and offender control variables. Parameter estimates are presented as odds ratios and interpreted as the percent change in the likelihood of murder with a firearm. In Model 1, time is associated with a 10.1% decrease in the odds of a murder being committed with a firearm (compared to some other type of weapon) after the Chicago firearm ban. Dummy variables representing the community area types are included in Model 2. In Model 2, time is associated with a 12.4% decrease in the odds of a murder being committed with a firearm after the ban.

Model 3 un-nests the victim and offender control variables from Model 2, thus having an impact on the odds ratios. The modeling reveals interesting findings for the community area types when comparing to gentrifying neighborhoods. For Model 3, from 1971 to 1993 stable upper communities show a 5.3% decline in homicides in comparison to gentrification. Moreover, positive change neighborhoods show a 20% decrease in murders when measured against gentrifying communities in Chicago. In this model, positive change is the only type not to have a significant coefficient. However, odds ratios for stable middle, poverty, extreme poverty, mild decline, moderate decline, and severe decline show increases in odds ratios when compared to gentrifying communities over the twenty-two years of data in this study. Surprisingly, stable middle neighborhoods (50%) firearm homicide rate increased faster than extreme poverty (33%) communities when analyzed against gentrification.

For Model 3, when analyzing the odds ratios of ethnic correlation to firearm murder in Chicago, black victims and Hispanic victims increased 42% and 50% as compared to white murder victims from 1971 to 1993. The findings of 54% increased

likelihood of black male murder offenders and a 57% increase for Latino male offenders as contrasted against white male offenders. As for the age of murder offenders and victims, it appears as though victims over the age of twenty-five decreased in their likelihood of being murdered between 1971 and 1993. However, offenders from ages fifty-five to seventy-five plus show dramatic increases of 60%, 195%, and 1,200% when compared to those in the 0 to 24 age category. This can most likely be explained by the relatively few murders the older age groups experience, therefore, a few homicides can statistically make a dramatic change.

Table 5.2 Models for Firearm (N= 17,727)

	Model 1 b/se	Model 2 b/se	Model 3 b/se
Firearm			
Time	0.899***	0.876***	0.777***
	(0.028)	(0.028)	(0.027)
Stable Upper		0.614***	0.947
		(0.069)	(0.126)
Stable Middle		1.199	1.499***
		(0.123)	(0.173)
Poverty		1.568***	1.258**
		(0.129)	(0.111)
Extreme Poverty		1.396***	1.326***
		(0.058)	(0.065)
Mild Decline		1.535***	1.487***
		(0.100)	(0.106)
Moderate Decline		1.576***	1.457***
		(0.126)	(0.123)
Severe Decline		1.408***	1.353***
		(0.067)	(0.072)
Positive Change		0.693	0.797
		(0.132)	(0.168)
Male Victim			2.974***
			(0.129)
Black Victim			1.420***
			(0.088)
Hispanic Victim			1.504***
			(0.112)
Other Victim			0.947
			(0.167)

Table 5.2 Models for Firearm Continued.

	Model 1 b/se	Model 2 b/se	Model 3 b/se
Victim Age 25 to 34			0.936
			(0.041)
Victim Age 35 to 44			0.681***
			(0.036)
Victim Age 45 to 54			0.488***
			(0.031)
Victim Age 55 to 64			0.419***
			(0.032)
Victim Age 65 to 74			0.261***
			(0.027)
Victim Age 75+			0.114***
			(0.018)
Black Male Offender			1.540***
			(0.125)
Hispanic Male Offender			1.572***
			(0.146)
Male Offender Unknown			1.130
			(0.238)
White Female Offender			0.608*
			(0.136)
Black Female Offender			0.439***
			(0.042)
Hispanic Female Offender			0.468*
			(0.145)
Female Offender Unknown			0.286*
			(0.155)
Offender Sex-Age-Race-ethnicity Missing			1.513***
			(0.131)
Offender Age 25 to 34			0.693***
			(0.031)
Offender Age 35 to 44			0.779***
			(0.048)
Offender Age 45 to 54			1.044
			(0.091)
Offender Age 55 to 64			1.603***
			(0.229)
Offender Age 65 to 74			2.951***
			(0.766)
Offender Age 75+			12.996***
			(7.172)

Table 5.2 Models for Firearm Continued.

	Model 1 b/se	Model 2 b/se	Model 3 b/se
Offender Age Missing			1.908***
			(0.279)
Constant	1.896***	1.502***	0.557***
	(0.042)	(0.051)	(0.048)
Chi^2	11.57***	172.333***	2007.82***
	(0.001)	(0.000)	(0.000)
Pseudo R^2	0.0005	0.0075	0.1091
*p<0.05, **p<0.01, ***p< 0.001			

Table 5.3 uses logistic regression to regress firearm murders post-policy implementation on community area types and the control variables. Again, parameter estimates are presented as odds ratios and interpreted as the percent change in the likelihood of murder with a firearm after the gun ban. It should be noted that this sample consists of only 11,397 cases which represent the homicides committed with a firearm between 1971 to 1981and 1983 to 1993.

Model 1 includes the eight community area types' odds ratios as compared against gentrifying neighborhoods after the 1982 firearm ban. Every community area type shows an increase in the likelihood of gun murders after the ban compared to gun murders before the ban, although not all of these coefficients are significant. Stable upper, stable middle, mild decline, moderate decline, and severe decline are the only community area types with significant coefficients. Stable upper communities report a 72% increase in post-ban firearm homicides when compared to gentrifying areas. Stable middle areas suggest a 31% increase, while mild decline has a 38% increase in post-ban homicides as compared to gentrification. Moderate decline communities have a 149%

increase post-ban, while severe decline has an 83% increase in Chicago firearm homicides from 1983 to 1993.

Table 5.3 Models for Firearm Time Variable (N=11,397)

	Model 1 b/se	Model 2 b/se
Stable Upper	1.720***	2.262***
	(0.282)	(0.412)
Stable Middle	1.306*	1.535**
	(0.165)	(0.209)
Poverty	1.167	1.029
	(0.111)	(0.101)
Extreme Poverty	1.092	1.076
	(0.057)	(0.063)
Mild Decline	1.382***	1.347***
	(0.105)	(0.107)
Moderate Decline	2.489***	2.358***
	(0.235)	(0.232)
Severe Decline	1.831***	1.819***
	(0.107)	(0.113)
Positive Change	1.164	1.186
	(0.316)	(0.327)
Male Victim		1.200**
		(0.074)
Black Victim		1.804***
		(0.150)
Hispanic Victim		1.505***
		(0.137)
Other Victim		1.696*
		(0.433)
Victim Age 25 to 34		0.814***
		(0.039)
Victim Age 35 to 44		0.771***
		(0.048)
Victim Age45 to 54		0.476***
		(0.040)
Victim Age 55 to 64		0.482***
		(0.052)

Table 5.3 Models for Firearm Time Variable Continued.

	Model 1 b/se	Model 2 b/se
Victim Age 65 to 74		0.399***
		(0.070)
Victim Age 75+		0.857
		(0.231)
Black Male Offender		0.996
		(0.111)
Hispanic Male Offender		1.346*
		(0.158)
Male Offender Unknown		2.912***
		(0.827)
White Female Offender		.411*
		(0.185)
Black Female Offender		0.681**
		(0.096)
Hispanic Female Offender		1.607
		(0.756)
Female Offender Unknown		1.085
		(1.057)
Offender Sex-Age-Race-ethnicity Missing		1.998***
		(0.232)
Offender Age 25 to 34		0.788***
		(0.042)
Offender Age 35 to 44		0.819**
		(0.062)
Offender Age 45 to 54		0.710**
		(0.075)

Table 5.3 Models for Firearm Time Variable Continued.

	Model 1 b/se	Model 2 b/se
Offender Age 55 to 64		1.093
		(0.166)
Offender Age 65 to 74		1.370
		(0.307)
Offender Age 75+		1.503
		(0.661)
Offender Age Missing		0.249***
		(0.040)
Constant	0.693***	0.425***
	(0.028)	(0.050)
Chi2	202.28***	791.6***
	(0.000)	(0.000)
Pseudo R2	0.0131	0.0578

*p<0.05, **p<0.01, ***p< 0.001

Model 2 introduces control variables, thus un-nesting their effect on community area type firearm homicides after the 1982 ban. Hypothesis 2 states community areas characterized by gentrification will be positively associated with firearm murders after the ban when compared to low social disorganization communities (e.g., stable upper and stable middle neighborhoods). Stable upper areas indicate a 126% increase in firearm homicides after the 1982 ban when measured against gentrifying areas during the same eleven year span. A 54% increase in gun murders from 1983 to 1993 for stable middle neighborhoods when analyzing gentrifying areas, together with the finding for stable upper communities, shows no support for Hypothesis 2 in Model 2. Both neighborhood coefficients are significant.

Furthermore, Hypothesis 3 states a negative relationship when comparing gentrifying community areas to those with high levels of social disorganization (e.g., extreme poverty and poverty neighborhoods). Although the coefficients are not significant, Model 2 indicates odds ratios for extreme poverty areas with an 8% increase in firearm homicides after the 1982 Chicago firearm policy. Moreover, neighborhoods of poverty have a 3% increase in gun murders from 1983 to 1993. Hypothesis 3 is supported by these findings.

Hypothesis 4 predicts a negative association among gentrifying areas when measured against declining communities. Those in the declining category are composed of mild declining, moderate declining, and severe declining Chicago neighborhoods. All three coefficients are significant for this model. The odds ratios in Model 2 show a 35% increase in firearm homicides after the policy implementation for areas in mild decline. Moderate declining communities had a 136% increase as compared to gentrifying neighborhoods post-firearm ban. Communities in severe decline have an 82% increase in gun homicides when measured against gentrification. The odds ratios for the neighborhoods in decline is supportive of Hypothesis 4.

The odds ratio in Model 2 for positive change communities indicates a 19% increase in Chicago firearm homicides from 1983 to 1993 when measured against gentrification. However, the coefficient is not significant. While the increase is modest, the data does not bolster Hypothesis 5 which predicted a decrease in post-ban firearm murders in positive change areas as compared to communities of gentrification.

In summary, Hypothesis 1 was not confirmed by the data showing a greater likelihood of Chicago firearm homicide from 1971 to 1981. Hypotheses 2 and 5 are contradicted by the odds ratios in Model 2 of Table 5.3. Hypotheses 3 and 4 are

supported by the odds ratios of high social disorganization and declining community area types (poverty, extreme poverty, mild decline, moderate decline, and severe decline).

Chapter Six

Conclusion

In October 2015, President Obama sought to resurrect gun control legislation in the aftermath of a mass shooting in Roseburg, Oregon (Rhodan, 2015). As discussed earlier in this thesis, mass shootings, while tragic and successful at garnering the attention of the media, represent little of the overall firearm homicide rate in the United States (Bjelopera et al., 2013). Restrictive gun laws and not-so-restrictive gun laws abound throughout the country depending what region one lives in (Anestis & Anestis, 2015).

This study seeks to add to the growing body of knowledge of homicide, firearms, and the laws which seeks to limit both. In addition, the author has introduced the role of social disorganization and how this impacts gun murders in an urban center like Chicago, Illinois in the late 20th century. While groundbreaking in 1942, is Shaw and McKay's theory still relevant when comparing gentrifying areas (which include all three principles of social disorganization theory) to other communities?

While this thesis is grounded in scientific method, the study does have limitations. One must question this research's impact on gun policy given the time limits of the years in question. This study encompasses twenty-two years of Chicago firearm homicide data, however, not all years of the virtual firearm ban were measured. This is a significant detriment to this thesis' finding of a positive impact of strict gun legislation when not even half of the years under which Chicago enacted the 1982 law are measured. Furthermore, the years 1971 to 1981 may not be the best representation of firearm homicide data since not all data pertaining to this variable is included. Such an undertaking would surely be beyond the scope of a thesis.

Another shortcoming is the inability to generalize the findings of this paper to other locations. Chicago, like all geographic entities, will have characteristics which may impact firearm homicide that other cities do not have. Generally, this is a problem in social science research; the inability to replicate findings (Tsang & Kwan, 1999). While the so-called hard sciences of nature are often tested and verified, social science has lagged behind in this field of research.

Furthermore, the rise in the 1980s crack epidemic which swept many urban centers may have had a larger impact on firearm homicide than Chicago's restrictive firearm policy. In particular, the increase in crime related to crack selling did not rise significantly until 1988, the last four years in question of this thesis (Johnson, Golub, & Fagan, 1994). Recall earlier in this paper when the author discussed the plateaued firearm homicide rate in Chicago during the mid-1980s. This stagnant gun murder rate could have been enough to lessen the impact of the late 1980s increase in crack market-related firearm homicides. Moreover, the crack market-related violence makes the control group (1971 to 1981) and the experimental group (1983 to 1993) inequivalent.

The first set of analyses seeks to determine if firearm is a significant factor in predicting Chicago homicides as compared to any other type of weapon. Hypothesis 1 addressed the gun murder rate in the eleven years prior to the 1982 Chicago firearm ban as measured against the same rate from 1983 to 1993. Comparing guns to other types of weapons used in the commission of a homicide, guns were less likely to be used in homicides after the ban, compared to other types of weapons, than before. This hypothesis was tested using city-level data which could not account for the varying levels of gun homicide in the nine community area types. Macro-level data such as these cannot

be used to draw definitive conclusions about the nature of firearm murder in a city of several million inhabitants.

The fact that 48.1% of firearm homicides occurred in the eleven years following the 1982 ban does suggest the gun ban had a marginal effect in lowering Chicago firearm murders. The decrease in Chicago gun homicides mirrors other literature which show a rise in gun violence following the implementation of less restrictive gun policies (Kovandzic et al., 2005; Kwon & Baack, 2005).

In particular, this thesis sought to identify if community area types had any bearing on gun murders after the 1982 ban. In 1942, Shaw and McKay posited the concept of poverty, ethnic heterogeneity, and neighborhood transience as indispensable factors that lead to crime. Historically, social disorganization theory was used to interpret crime in poverty-stricken areas with no signs of improvement. When urban American cities began the process of gentrification in the 1960s, social disorganization theory met a formidable test. Gentrifying communities have the same three tenets of Shaw and McKay's important theory, yet, are by definition, areas undergoing revitalization.

The first study measured the impact of firearm on community area typology and victim and offender variables. Model 3 in Table 5.2 suggests a decline in firearm homicides over the twenty-two years for all community area types with significant coefficients. In addition, both black and Hispanic victims demonstrated increases in Chicago firearm homicides when compared to white victims. Likewise, black male offenders and Hispanic male offenders had significant coefficient increases as compared to white offenders.

Model 3 also revealed data pertaining to age of victims and offenders in relation to Chicago firearm murders. All victim age categories, with the exception of 25 to 34,

have significant coefficients. As compared to the control group of age group 0 to 24, all victim age groups declined in gun homicides from 1971 to 1993. Moreover, offender age has significant coefficients with the exception of those in the 45 to 54 category. Both 25 to 34 and 35 to 44 suggest decreases in firearm murder compared to 0 to 24. However, 55 to 64, 65 to 74, and 75+ all have increases when compared to 0 to 24. This finding may be suggestive of the relatively few homicides occurring within these age groups, thus a few years with several extra homicides could seriously skew the data.

Study 2 seeks to measure the impact of post-ban firearm homicides on time. Model 2 in Table 5.3 un-nests the control variables hidden within the Chicago community area types. All community areas increased in firearm homicides post-1982 when compared against gentrifying neighborhoods. In addition, black victims, Hispanic victims, and other victims had significant coefficients and demonstrate increases in post-ban homicides when compared to white victims. Hispanic male offenders also show a small increase when compared to white offenders. Moreover, male offender unknown shows a large increase over white offenders. The large amount of missing in this category suggests the findings do not have measurement validity.

Victim age categories, with the exception of 75+ have significant coefficients and decline in relation to 0 to 24 age group firearm homicides from 1983 to 1993. The offender age categories of 25 to 34, 35 to 44, and 45 to 54 all have decreases in Chicago post-ban firearm homicides in relation to the 0 to 24 group. The categories of 55 to 64, 65 to 74, and 75+ had increases when compared to 0 to 24, but none were significant.

Hypothesis 2 compared low social disorganization areas with gentrifying neighborhoods. Model 3 in Study 1 shows mixed results between stable upper and stable middle CATs. Stable upper communities appear to have declining firearm homicide rates

after 1982. Furthermore, the decline is less pronounced once the age, sex, race, variables are introduced in Model 3. Stable middle communities have an approximate 20% increase in firearm murders compared to gentrifying areas. However, Model 3 shows almost a 50% increase when the other variables enter into the model. Both Model 1 and 2 in Study 2 show much larger increases in firearm homicide post-1982. These findings are inconsistent with hypothesis 2. S

Hypothesis 3 measured high social disorganization areas against gentrifying communities and uncovered increased firearm homicide rates for neighborhoods of poverty and extreme poverty. Study 1, Model 2 shows roughly 55% and 40% increases in firearm homicides in poverty and extreme poverty CATs as compared to gentrifying areas. However, poverty falls to 26% and extreme poverty decreases to 32% in Model 3 when the age, sex, race variables are introduced into the modeling. Study 2 shows modest increases in the likelihood of a firearm homicide post-1982 for poverty and extreme poverty areas as compared to gentrifying neighborhoods. Both Model 1 and Model 2 show increases of less than 10% in post-1982 firearm murders for high social disorganization communities when measured against the control group.

Hypothesis 4 analyzed declining areas (mild, moderate, and severe) against gentrifying communities and found increases for all three declining community types when measuring gun murders for Study 1. In particular, Model 2 in the first study shows 54%, 58%, and 41% increases in the likelihood of firearm homicide in Chicago over twenty-two years of this thesis. However, in Model 3, the increases are moderated to 49%, 46%, and 35% when the age, sex, race variables are factored into the model. Model 1 in Study 2 has interesting findings for moderately and severely declining communities. In particular, moderate decline shows a 149% increase in the likelihood of a firearm

murder when compared to gentrifying areas post-1982. However, this very large increase decreases roughly 10% in Model 2 when the remaining variables are factored into the modeling.

Furthermore, severely declining communities increased in 82% for firearm homicides in Model 2. A drastic rise in firearm homicides for moderate and severe decline CATs was not expected. This author can only assume the declining communities once had very low gun murder rates during the collection of the Voorhees data. Perhaps the change from once being less unorganized area only to turn into a declining community can explain the large rises in firearm homicide for severe, mild, and moderate declining CATs.

Lastly, Hypothesis 5 compared positive change areas against gentrifying neighborhoods and found a decline in firearm homicides as compared to other types of weapons used in Study 1. In particular, Model 2 shows an approximate 30% decrease as compared to gentrifying communities. Model 3 shows 20% decline for positive change versus gentrification when the age, sex, race variables are figured into the modeling.

In contrast, Study 2 has the opposite conclusion. Model 1 shows a 16% increase in firearm homicides as compared to gentrification post-1982. Model 2 shows a 19% increase when the Voorhees variables are included. These findings suggest an aspect that needs further research. The untangling of what constitutes a difference in firearm murder rates for similar communities needs to be explored. Every community area type experienced an increase in gun homicides after gun policy implementation in comparison to areas undergoing gentrification. These finding seem to raise more questions than provide answers as to the interaction between social disorganization theory and gentrifying areas of Chicago.

While experiencing the same three major principles of social disorganization theory (poverty, ethnic heterogeneity, and neighborhood transience), gentrifying communities do not appear to cause the same level of firearm homicide increases as the data indicates for the other eight community area types. Even low social disorganization neighborhoods (stable upper and stable middle) experienced greater increases in firearm homicides without having any of the characteristics of social disorganization theory. Any conclusions drawn from this thesis should carry the caveat of a non-representative sample.

The data indicate social disorganization theory best describes crime causation in poor areas not undergoing structural and economic improvements. One cannot fault Shaw and McKay for not accounting for gentrification since the concept did not exist in the United States until thirty years after their landmark study. However, their theory has survived many changes in the urban American culture since 1942.

Furthermore, the finding of an increased likelihood of Chicago firearm homicides from 1971 to 1981 adds to the ongoing gun legislation debate. The literature review provides no conclusive results for the impact of firearm laws on crime with a mixture of results. While the Chicago gun murder rates from 1983 to 1993 declined in relation to the eleven years prior to the ban, it is not known if the control variables of age, race-ethnicity, and gender adequately cover all contingencies that could cause the homicide rate to change. The control variables chosen for this thesis are used due to their generality to cover different groups involved in crime. However, there may be specific societal factors in Chicago which this author did not touch on that may impact homicide rates.

Officially, Chicago elects a non-partisan mayor, however, each city alderman is affiliated as a Democrat (O'Donovan, 2012). Besides Washington D.C., Chicago has

some of the most stringent firearm policies in the United States. The Democratic Party has also called for tighter gun restrictions, to include enhanced background investigations and reinstating the 1994 assault weapons ban. In contrast, the Republican Party has called for greater gun availability. Given the ambiguity of the literature on guns and violence, policy makers may consider that strict gun control and relaxed firearm laws have a minimal impact of gun murders.

A greater concentration on the factors which lead to gun violence may be more beneficial, and less controversial than gun legislation. Further research into decreasing concentrated urban poverty has the ability to impact firearm homicides more than any firearm law. A better understanding of the communities in concentrated urban poverty, instead of focusing on the individual, could eventually lead to a reduction in firearm homicides (Sampson & Wilson, 1995). Policy makers could benefit from unraveling the causes of family disruption in areas of concentrated poverty. However, this is a long-term solution and is not likely to immediately influence politicians who perpetually have the next election cycle to worry about.

Nevertheless, this study does add to the growing body of knowledge in relation to social disorganization theory and firearm murder. Future research into social disorganization theory could benefit from understanding the different levels of poverty in an urban setting and how this impacts a community's level of criminality. In addition, studies should seek to uncover the particular factors which cause the lower rate of firearm homicide in gentrifying communities, despite fitting the criteria of social disorganization theory.

Moreover, firearm homicide research can benefit from obtaining a true baseline number of guns in private possession. This may be an impossible task given the nature of

private and gun show sales in the United States. Moreover, the lack of firearm registration is controversial and is not likely to happen on a national scale. Alone, this fact leaves researchers with a huge dilemma when none can identify how many privately owned firearms exist. Guns laws are passed to either enhance owner's rights or restrict them. It is not known if gun legislation actually affects ownership rates.

References

Aichorn, A. (1935). *Wayward youth*. New York: The Viking Press.

Albright, L., Derickson, E.S., & Massey, D.S. (2013). Do affordable housing projects harm suburban communities? Crime, property values, and taxes in Mount Laurel, NJ. *City & Community*, 12(2), 89-112.

Almgren, G., Guest, A., Immerwahr, G., & Spittel, M. (1998). Joblessness, family disruption, and violent death in Chicago, 1979-1990. *Social Forces*, 76(4), 1465-1494.

Anestis, M.D., & Anestis, J.C. (2015). Suicide rates and state laws regulating access and exposure to handguns. *American Journal of Public Health*, 105(10), 2049-2058.

Apel, R., & Kaukinen, C. (2008). On the relationship between family structure and antisocial behavior: Parental cohabitation and blended households. *Criminology*, 46(1), 35-70.

Atkinson, R. (2000). The hidden cost of gentrification: Displacement in central London. *Journal of Housing and the Built Environment*, 15, 307-326.

Ayres, I., & Donohue J.J. (2002). Shooting down the more guns, less crime hypothesis.National Bureau of Economic Research. Retrieved from http://www.nber.org/papers/w9336.pdf

Baskerville, J.D. (2001). African-American migration. *University of Northern Iowa.* Retrieved from http://www.uni.edu/historyofblackhawkcounty/peopimmigrants/African-AmericanMg/HeadingNorth.htm

Bellair, P.E. (1997). Social interaction and community crime: Examining the importance of neighbor networks. *Criminology*, 35(4), 677-704. doi: 10.1111/j.1745-9125.1997.tb01235.x

Bjelopera, J.P., Bagalman, E., Caldwell, S.W., Finklea, K.M., & McCallion, G. (2013). *Public mass shootings in the United States: Selected implications for Federal public health and safety policy.* Congressional Research Service. Retrieved from https://www.fas.org/sgp/crs/misc/R43004.pdf

Black, D.A., & Nagin, D.S. (1998). Do right-to-carry laws deter violent crime? *Journal of Legal Studies*, 27(1), 209-219.

Block, C.R., & Block, R. (1993). Street gang crime in Chicago. National Institute of Justice. U.S. Department of Justice. Retrieved from http://www.popcenter.org/problems/gun_violence/PDFs/Block_Block_1993.pdf

Blumstein, A. (2001). Why is crime falling-Or is it? *H. John Heinz III School of Public Policy and Management, Carnegie Mellon University.* Washington, D.C. Retrieved from http://www.schmalleger.com/pubs/LS2001-2_1.pdf

Bureau of Justice Statistics. (2011). Homicide trends in the United States, 1980-2008. *U.S. Department of Justice*. Retrieved from http://www.bjs.gov/content/pub/pdf/htus8008.pdf

Bureau of Justice Statistics. (2013). Firearm violence, 1993-2011. *U.S. Department of Justice.* Retrieved from http://www.bjs.gov/content/pub/pdf/fv9311.pdf

Bureau of Labor Statistics. (2009). Ranks of discouraged workers and others marginally attached to the labor force rise during recession. *U.S. Department of Labor*. Retrieved from http://www.bls.gov/opub/btn/archive/ranks-of-discouraged-workers-and-others-marginally-attached-to-the-labor-force-rise-during-recession-pdf.pdf

Bureau of Labor Statistics. (2014). Labor force statistics from the current population survey. *U.S. Department of Labor*. Retrieved from http://www.bls.gov/cps/cps_htgm.htm#nilf

Bursik, R.J. (1986). Ecological stability and the dynamics of delinquency. *Communities and Crime,* edited by A.J. Reiss Jr., and M. Tonry. Chicago: University of Chicago.

Bursik, R.J. (1988). Social disorganization and theories of crime and delinquency: Problems and prospects. *Criminology,* 26(4), 519-552.

Centers for Disease Control and Prevention. (2011). Homicides-United States, 1999-2007. National Center for Injury Prevention and Control, CDC, 60(1), 67-70.

Centers for Disease Control and Prevention. (2011). Violence-related firearm deaths among residents of metropolitan areas and cities-United States, 2006-2007. Morbidity and Mortality Weekly Report, 60(8), 573-578.

Chicago Alternative Schools Network. (2014). Trends in teen employment in Chicago, Illinois, and the United States. *Trends in teen employment*. Retrieved from http://www.thechicagourbanleague.org/cms/lib07/IL07000264/Centricity/Domain/76/Trends-in-Teen-Employment-in-Chicago-Illinois.pdf

Chicago Police Department. (1983). *Statistical Summary 1983.* Retrieved from https://portal.chicagopolice.org/portal/page/portal/ClearPath/News/Statistical%20Reports/Annual%20Reports/1983_AR.pdf

Chicago Police Department. (1984). *Statistical Summary 1984*. Retrieved from https://portal.chicagopolice.org/portal/page/portal/ClearPath/News/Statistical%20Reports/Annual%20Reports/1984_AR.pdf

Chicago Police Department. (1985). *Statistical Summary 1985.* Retrieved from https://portal.chicagopolice.org/portal/page/portal/ClearPath/News/Statistical%20Reports/Annual%20Reports/1985_AR.pdf

Chicago Police Department. (1986). *Annual Report 1986.* Retrieved from https://portal.chicagopolice.org/portal/page/portal/ClearPath/News/Statistical%20Reports/Annual%20Reports/1986_AR.pdf

Chicago Police Department. (1987). *Annual Report 1987.* Retrieved from https://portal.chicagopolice.org/portal/page/portal/ClearPath/News/Statistical%20Reports/Annual%20Reports/1987_AR.pdf

Chicago Police Department. (1991). *Annual Report 1991.* Retrieved from https://portal.chicagopolice.org/portal/page/portal/ClearPath/News/Statistical%20Reports/Annual%20Reports/1991_AR.pdf

Chicago Police Department. (1992). *Annual Report 1992.* Retrieved from https://portal.chicagopolice.org/portal/page/portal/ClearPath/News/Statistical%20Reports/Annual%20Reports/1992_AR.pdf

Chicago Police Department. (2008). *2008 Annual Report: A Year in Review.* Retrieved from https://portal.chicagopolice.org/portal/page/portal/ClearPath/News/Statistical%20Reports/Annual%20Reports/08AR%5B1%5D.pdf

City of Chicago. (1982). Journal of the proceedings of the city council of the City of Chicago, Illinois. Retrieved from http://docs.chicityclerk.com/journal/1982/031982optimize.pdf

Cloward, R.A., & Ohlin, L.E. (1960). *Delinquency and opportunity: A theory of delinquent gangs.* New York, NY: Free Press.

Cook, P.J. (1991). The technology of personal violence. In Tonry, M. (ed.) *Crime and Justice: An Annual Review of Research,* 14. Chicago, IL: University of Chicago Press.

Crutchfield, R.D. (1989). Labor stratification and violent crime. *Social Forces*, 68(2), 489-512.

Crutchfield, R.D., & Pitchford, S.R. (1997). Work and crime: The effects of labor stratification. *Social Forces*, 76, 93-118.

Cummings, J.L., DiPasquale, D., & Kahn, M.E. (2002). Measuring the consequences of promoting inner city homeownership. *Journal of Housing Economics,* 11(4), 330-359.

Dahlberg, L.L., Ikeda, R.M., & Kresnow, M. (2004). Guns in the home and risk of a violent death in the home: Findings from a national study. *American Journal of Epidemiology*, 160(10), 929-936.

Dietz, R.D., & Haurin, D.R. (2003). The social and private micro-level consequences of homeownership. *Journal of Urban Economics*, 54(3), 401-450.

District of Columbia v. Heller, 07-290 (128 S. Court, 2008).

Duggan, M. (2001). More guns, more crime. *Journal of Political Economy,* 109(5), 1086-1114.

Fabio, A., Li-Chuan, T., Loeber, R., & Cohen, J. (2011). Neighborhood socioeconomic disadvantage and the shape of the age-crime curve. *American Journal of Public Health*, 101(51), 325-332.

Fan, M.D. (2015). Disarming the dangerous: Preventing extraordinary and ordinary violence. *Indiana Law Journal*, 1(90), 151-178.

Federal Bureau of Investigation. (2003). Age-specific arrest rates and race-specific arrest rates for selected offenses 1993-2001. *Uniform Crime Reports*. Retrieved from http://www.fbi.gov/about-us/cjis/ucr/additional-ucr-publications/age_race_arrest93-01.pdf

Federal Bureau of Investigation. (2008). Crime in the United States. Retrieve from http://www.fbi.gov/about-us/cjis/ucr/additional-ucr-publications/age_race_arrest93-01.pdfhttp://www2.fbi.gov/ucr/cius2008/offenses/expanded_information/data/shrtable_07.html

Federal Bureau of Investigation. (2014). Crime in the United States: 2013. Retrieved from https://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2013/crime-in-the-u.s.-2013/violent-crime/murder-topic-page/murdermain_final

Fingerhut, L.A., & Kleinman, J.C. (1990). International and interstate comparisons of homicide among young males. *Journal of the American Medical Association,* 263, 3292-3295.

Fox, J.A., & DeLateur, M.J. (2014). Weapons of mass (murder) destruction. *New England Journal on Criminal & Civil Confinement*, 40, 313-343.

Gallup. (2011). Self-reported gun ownership in U.S. is highest since 1993. Gallup Politics. Retrieved from http://www.gallup.com/poll/150353/self-reported-gun-ownership-highest-1993.aspx

Galster, G., Booza, J., Cutsinger, J., Metzger, K., & Lim, U. (2005). *Low-income households in mixed-income neighborhoods: Extent, trends, and detriments.* Washington, D.C.: U.S. Department of Housing and Urban Development, Policy Development and Research.

Glass, R. (1964). *London: Aspects of change.* London: MacGibbon & Kee.

Graduate Institute of International Studies. *Small Arms Survey 2007.* (2007). *Guns and the city.* Cambridge, NY: Cambridge University Press.

Hall, G.S. (1904). *Adolescence: Its psychology and its relation to physiology, anthropology, sociology, sex, crime, religion, and education.* (Vols. I & II). Englewood Cliffs, NJ: Prentice-Hall.

Herbert, C.E., & Belsky, E.S. (2008). The homeownership experience of low-income and minority households: A review and synthesis of the literature. *Cityscapes*, 10(2), 5-60.

Hipp, J.R. (2010). The role of crime in housing unit racial/ethnic transition. *Criminology,* 48(3), 683-723.

Hipp, J.R., Tita, G.E., & Greenbaum, R.T. (2009). Drive-bys and trade-ups examining the directionality of the crime and residential instability relationship. *Social Forces,* 87(4), 1777-1812.

Hirschi, T., & Gottfredson, M. (1983). Age and the explanation of crime. *The American Journal of Sociology*, 89(3), 552-584. Retrieved from http://troublesofyouth.pbworks.com/f/age+and+the+explanation+of+crime+-+Hirschi+and+Gott.pdf

Hood, M.V., & Neely, G.W. (2000). Packin' in the hood? Examining assumptions of concealed-handgun research. *Social Science Quarterly*. 81(2), 523-537.

Hsieh, C.C., & Pugh, M.D. (1993). Poverty, income inequality, and violent crime: A meta-analysis of recent aggregate data studies. *Criminal Justice Review,* 18(2), 182-202.

Johnson, B.D., Golub, A., & Fagan, J. (1994). Careers in crack, drug use, drug distribution, and nondrug criminality. Retrieved from the NCJRS website: https://www.ncjrs.gov/pdffiles1/Digitization/153430NCJRS.pdf

Jones, E.D. (1981). The District of Columbia's "Firearms Control Regulations Act of 1975": The toughest handgun control law in the United States—or is it? *Annals of the American Academy of Political and Social Science*, 455, 138-149.

Kaplan, M.S., & Geling, O. (1998). Firearm suicides and homicides in the United States: Regional variations and patterns of gun ownership. *Social Science Med,* 46, 1227-1233.

Kasarda, J.D. (1995). Industrial restructuring and changing job locations. In *State of the Union: America in the 1990s,* Vol. 1, ed. Reynolds Farley, 215-267. New York: Russell Sage.

Kates, D.B., & Mauser, G. (2007). Would banning firearms reduce murder and suicide? *Harvard Journal of Law & Public Policy*, 30(2), 650-694.

Kingston, B., Huizinga, D., & Elliot, D.S. (2009). A test of social disorganization theory in high-risk urban neighborhoods. *Youth & Society*, 41(1), 53-79.

Kirk, D.S., & Laub, J.H. (2010). Neighborhood change and crime in the modern metropolis. *The University of Chicago,* 441-502. Retrieved from http://www.utexas.edu/cola/_files/kirkds/KirkLaub_CJ2010_Published.pdf

Kirk, D.S., & Papachristos, A.V. (2011). Neighborhood violence. *American Journal of Sociology*, 116(4), 1190-1233.

Kleck, G. (1997). *Targeting guns: Firearms and their control.* New York, NY: Transaction.

Kleck, G., & Delone, M. (1993). Victim resistance and offender weapon effects in robbery. *Journal of Quantitative Criminology*, 9, 55-82.

Kornhauser, R.R. (1978). *Social sources of delinquency: An appraisal of analytic models.* Chicago, IL: University of Chicago Press.

Kovandzic, T.V., & Marvell, T.B. (2003). Right-to-carry concealed handguns and violent crime: Crime control through gun decontrol? *Criminology,* 2(3), 363-396. doi: 10.1111/j.1745-9133.2003.tb00002.x

Kovandzic, T., Marvell, T., & Vieraitis, L. (2005). The impact of "shall-issue" concealed handgun laws on violent crime rates: Evidence from panel data for large urban cities. *Homicide Studies*, 9(4), 292-323.

Kreager, D.A., Lyons, C.J., & Hays, Z.R. (2011). Urban revitalization and Seattle crime, 1982-2000. *Social Problems,* 58(4), 615-639. Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4259159/

Krivo, L.J., & Peterson, R.D. (1996). Extremely disadvantaged neighborhoods and urban crime. *Social Forces*, 75(2), 619-648.

Krivo, L.J., & Peterson, R.D. (2000). The structural context of homicide: Accounting for racial differences in process. *American Sociological Review*, 65(4), 547-559.

Kubrin, C.E., & Weitzer, R. (2003). New directions in social disorganization theory. *Journal of Research in Crime and Delinquency*, 40(4), 374-402.

Kwon, I.G., & Baack, D.W. (2005). The effectiveness of legislation controlling gun usage. *The American Journal of Economics and Sociology*, 64(2), 533-547.

LaFree, G., Baumer, E.P., & O'Brien, R. (2010). Still separate and unequal? A city-level analysis of the black-white gap in homicide arrests since 1960. *American Sociological Review*, 75(1), 75-100.

Lee, M.R. (2000). Concentrated poverty, race, and homicide. *The Sociological Quarterly*, 41(2), 189-206.

Lee, M.T. (2003). *Crime on the border: Immigration and homicide in urban communities*. New York: LFB Scholarly Publishing.

Lee, M.T., & Martinez, R. (2006). Immigration and Asian homicide patterns in urban and suburban San Diego. In *Immigration and crime: Race, ethnicity, and violence*, eds. Ramiro Martinez, Jr. and Abel Valenzuela, Jr. New York: New York University Press.

Lee, Y.Y. (2010). Gentrification and crime: Identification using the 1994 Northridge Earthquake in Los Angeles. *Journal of Urban Affairs*, 32(5), 549-577.

Lemieux, F. (2014). Effect of gun culture and firearm laws on gun violence and mass shootings in the United States: A multi-level quantitative analysis. *International Journal of Criminal Justice Sciences*, 9(1), 74-93.

Lens, M.C. (2013). The limits of housing investments as a neighborhood revitalization tool. *Journal of the American Planning Association*, 79(3), 211-221.

Ley, D. (1986). Alternative explanations for inner-city gentrification: A Canadian assessment. *Annals of the Association of American Geographers*, 76(4), 521-535. Retrieved from http://rohcavamaintenant.free.fr/CLE%20USBAICHE/USB%20KEY%20Fahriye/GENTRIFICATION/DAVID%20LEY-INNER%20CITY%20GENTRIFICATION.pdf

Lin, J. (2002). Gentrification and transit in northwest Chicago. *Journal of the Transportation Research Forum*, 56(4), 175-191.

Lindblad, M.R., Manturuk, K.R., & Quercia, R.G. (2013). Sense of community and informal social control among lower income households: The role of homeownership and collective efficacy in reducing subjective neighborhood crime and disorder. *American Journal of Community Psychology,* 51, 123-139.

Lott, J.R. (2010). *More guns, less crime: Understanding crime and gun control laws.* Chicago, IL: University of Chicago Press.

Lott, J.R., & Mustard, D.B. (1997). Crime, deterrence, and right-to-carry concealed handguns. *John M. Olin Law & Economics Working Paper,* 41, 1-42.

Ludwig, J. (1998). Concealed-gun-carrying laws and violent crime: Evidence from state panel data. *International Review of Law and Economics.* 18, 239-254.

Martinez, R. (2002). *Latino homicide: Immigration, violence, and community.* New York: Routledge.

Martinez, R., Stowell, J.I., & Cancino, J.M. (2008). A tale of two border cities: Community context, ethnicity, and homicide. *Social Science Quarterly*, 89(1), 1-16.

Martinez, R., Stowell, J.I., & Lee, M.T. (2010). Immigration and crime in an era of transformation: A longitudinal analysis of homicides in San Diego neighborhoods, 1980-2000. *Criminology*, 48(3), 797-829.

Marvell, T.B., & Moody, C.E. (1999). Female and male homicide victimization rates: Comparing trends and regressors. *Criminology*, 37(4), 879-902.

Massey, D., & Denton, N. (1993). *American apartheid*. Cambridge: Harvard University Press.

McCall, P.L., Land, K.C., & Cohen, L.E. (1992). Violent criminal behavior: Is there a general and continuing influence of the South? *Social Science Research,* 21, 286-310.

McDonald, S.C. (1986). Does gentrification affect crime rates? In A.J. Reiss Jr. and M. Tonry (eds.) *Communities and crime.* Chicago: University of Chicago Press.

McDowall, D. (1991). Firearm availability and homicide rates in Detroit, 1951-1986. *Social Forces,* 69(4), 1085-1101.

McGahey, R. (1986). Economic conditions, neighborhood organization, and urban crime. *Crime and Justice*, 8, 231-270.

McLaughlin, C. R., Daniel, J., Reiner, S. M., Waite, D. E., Reams, P. N., Joost, T. F., . . . Gervin, A. S. (2000). Factors associated with assault-related firearm injuries in male adolescents. *Journal of Adolescent Health*. doi:10.1016/S1054-139X(99)00100-7

Messner, S.F., Raffalovich, L., & McMillan, R. (2001). Economic deprivation and changes in homicide arrest rates for white and black youths, 1967-1998: A national time-series analysis. *Criminology,* 39(3), 591-614.

Metzl, J.M., & MacLeish, K.T. (2015). Mental illness, mass shootings, and the politics of American firearms. *American Journal of Public Health,* 105(2), 240-249.

Miller, M., Azrael, D., & Hemenway, D. (2002). Firearm availability and suicide, homicide, and unintentional firearm deaths among women. *Journal of Urban Health,* 79, 26-38.

Moody, C.E., & Marvell, T.B. (2005). Guns and crime. *Southern Economic Journal*, 71(4), 720-736.

Moore, M.D., & Sween, M. (2015). Rural youth crime: A reexamination of social disorganization theory's applicability to rural areas. *Journal of Juvenile Justice*. Retrievd from: http://www.journalofjuvjustice.org/JOJJ0401/article04.htm

Morenoff, J.D., & Sampson, R.J. (1997). Violent crimes and the spatial dynamics of neighborhood transition: Chicago, 1970-1990. *Social Forces,* 76, 31-64.

Morton, E.J., (ed.) (2008). *Serial murder: Multi-Disciplinary perspectives for investigators. FBI.* Behavioral Analysis Unit, National Center for the Analysis of Violent Crime.

National Institute of Justice. Department of Justice. (1997). *Project on human development in Chicago neighborhoods.* Research report. Retrieved from https://www.ncjrs.gov/pdffiles1/Digitization/163495NCJRS.pdf

Nagourney, A. (2014, April 26). In California, a fevered rush for gun permits. *The New York Times.* Retrieved from http://www.nytimes.com/2014/04/27/us/politics/in-california-a-fevered-rush-for-gun-permits.html

Nunley, J.M., Seals, R.A., & Zietz, J. (2011). Demographic change, macroeconomic conditions, and the murder rate: The case of the United States, 1934-2006. *The Journal of Socio-Economics*, 40, 942-948.

Nye, F. I. (1958). *Family relationships and delinquent behavior.* Oxford, England: John Wiley.

Olson, L. (2006). The down staircase. In *Diplomas count: An essential guide to graduation policy and rates.* Special issue of *Education Week,* 25(41S), June 22.

Osgood, D.W., Wilson, J.K., Bachman, J.G., O'Malley, P.M., & Johnston, L.D. (1996). Routine activities and individual deviant behaviors. *American Sociological Review,* 61, 635-655.

O'Sullivan, A. (2005). Gentrification and crime. *Journal of Urban Economics,* 57(1), 73-85.

Papachristos, A.V. (2013). 48 years of crime in Chicago: A descriptive analysis of serious crime trends from 1965 to 2013. *Institution for Social and Policy Studies,* 1-20.

Papachristos, A.W., Smith, C.M., Scherer, M.L., & Fugiero, M.A. (2011). *City & Community,* 10(3), 215-240.

Park, R.E., & Burgess, E.W. (1925). *The city.* Chicago: University of Chicago Press.

Peterson, R.D., & Krivo, L.J. (2005). Macrostructural analyses of race, ethnicity, and violent crime: Recent lessons and new directions for research. *Annual Review of Sociology,* 31, 331-356.

Pew Research Center. (2014). *Growing public support for gun rights: More say guns do more to protect than put people at risk.* Retrieved from http://www.people-press.org/2014/12/10/growing-public-support-for-gun-rights/

Pope, D.G., & Pope, J.C. (2012). Crime and property values: Evidence from the 1990s crime drop. *Regional Science and Urban Economics,* 42(1), 177-188.

Rhodan, M. (2015, October 9). President Obama mulls executive actions on gun control. *Time.* Retrieved from http://time.com/4068040/barack-obama-gun-control-executive-actions/

Ropeik, D. (2014, April 14). On gun policy, both sides have something to fear. *The New York Times.* Retrieved from http://www.nytimes.com/roomfordebate/2013/01/06/what-the-fight-over-guns-is-really-about/on-gun-policy-both-sides-have-something-to-fear

Sampson, R.J. (1987). Urban black violence: The effect of male joblessness and family disruption. *American Journal of Sociology,* 93(2), 348-383.

Sampson, R.J. (1993). Linking time and place: Dynamic contextualism and the future of criminological inquiry. *Journal of Research in Crime and Delinquency,* 4(30), 426-444.

Sampson, R.J. (1997). Neighborhoods and violent crime: A multilevel study of collective efficacy. *Science,* 277, 918-924.

Sampson, R.J., Raudenbush, S.W., & Earls, F. (1997). Neighborhoods and violent crime: A multilevel study of collective efficacy. *Science,* 277, 918-924.

Sampson, R.J. (2012). *Great American city: Chicago and the enduring neighborhood effect.* Chicago, IL: University of Chicago Press.

Sampson, R.J., & Groves, W.B. (1989). Community structure and crime: Testing social-disorganization theory. *The American Journal of Sociology,* 94(4), 774-802.

Sampson, R.J., & Raudenbush, S.W. (2004). Seeing disorder: Neighborhood stigma and the social construction of "broken windows". *Social Psychology Quarterly,* 67(4), 319-342.

Sampson, R.J., & Wilson, W.J. (1995). Toward a theory of race, crime, and urban inequality. In *Crime and inequality,* John Hagan and Ruth Peterson, 37-56. Stanford, CA: Stanford University Press.

Sampson, R.J., Morenoff, J.D., & Raudenbush, S. (2005). Social anatomy of racial and ethnic disparities in violence. *American Journal of Public Health,* 224-232.

Schuerman, L., & Korbin, S. (1986). *Community careers in crime.* In *Community and Crime,* edited by A.J. Reiss, Jr. and M. Tonry. Chicago: University of Chicago.

Shaw, C.R., & McKay, H.D. (1942). *Juvenile delinquency and urban areas: A study of rates of delinquents in relation to differential characteristics of local communities in American cities.* Chicago, IL: University of Chicago Press.

Schaffer, R., & Smith, N. (1986). The gentrification of Harlem? *Annals of the Association of American Geographers,* 76(3), 347-365.

Schroeder, R.D., Osgood, A.K., & Oghia, M.J. (2010). Family transitions and juvenile delinquency. *Sociological Inquiry,* 579-604.

Schwartz, A.E., Susin, S., & Voicu, I. (2003). Has falling crime driven New York City's real estate boom? *Journal of Housing Research,* 14(1), 101-135.

Scott, T.L. (2010). Offender perceptions on the value of employment. *The Journal of Correctional Education,* 61(1), 46-67.

Smith, M. (1982). *The dynamics of rental housing in New York City.* New Brunswick, NJ: Center for Urban Policy Research, Rutgers University.

Smith, T.W., Laken, F., & Son, J. (2014). Gun ownership in the United States: Measurement issues and trends. *GSS Methodological Report*, 123. Retrieved from http://publicdata.norc.org:41000/gss/documents//MTRT/MR123%20Gun%20Ownership.pdf

Sweeten, G., Piquero, A.R., & Steinberg, L. (2013). Age & the explanation of crime, revisted. *Journal of Youth and Adolescents*, 30, 921-938.

Sutherland, E.H. (1960). *Principles of Criminology.* (6th Ed.) Philadelphia: Lippincott.

Tardiff, K., Marzuk, P.M., & Leon, A.C. (1994). Homicide in New York City: Cocaine use and firearms. *Journal of the American Medical Association*, 272, 43-46.

Taylor, M. (1992). Can you go home again? Black gentrification and the dilemma of difference. *Berkley Journal of Sociology*, 37, 121-138.

The National Academy of Sciences. (2004). *Firearms and violence: A critical review.* Retrieved from http://www.nap.edu/openbook.php?record_id=10881&page=6

The White House. Office of the Press Secretary. (2013). Fact sheet: Strengthening the federal background check system to keep guns out of potentially dangerous hands. Retrieved from http://www.whitehouse.gov/the-press-office/2014/01/03/fact-sheet-strengthening-federal-background-check-system-keep-guns-out-p

The Voorhees Center (2003). Interpreting neighborhood change in Chicago. *Nathalie P. Voorhees Center for Neighborhood and Community Improvement.* College of Urban Planning and Public Affairs Great Cities Institute. University of Illinois at Chicago. Retrieved from www.uic.edu/cuppa/voorheesctr/Publications/VNC%20CONFERENCE.pdf

Thrasher, F.M. (1927). *The gang*. Chicago: The University of Chicago Press.

Tita, G.E., Petras, T.L., & Greenbaum, R.T. (2006). Crime and residential choice: A neighborhood level analysis of the impact of crime on housing prices. *Journal of Quantitative Criminology*, 22(4), 299-317.

Toby, J. (1957). Social disorganization and stake in conformity: Complementary factors in the predatory behavior of hoodlums. *Journal of Criminal Law and Criminology*, 48(1), 12-17.

Tsang, E.W.K, & Kwan, K. (1999). Replication and theory development in organizational science: A critical realist perspective. *Academy of Management Review*, 24(4), 759-780.

United States Census Bureau. (2010). Changing distributions: Where blacks and African-Americans lived in the U.S. from 1900 to 2010. Retrieved from https://www.census.gov/newsroom/releases/img/cb14ff-03_black_history_month.jpg

United States Census Bureau. (2013). State and county quick facts. Retrieved from http://quickfacts.census.gov/qfd/states/00000.html

Urban Land Institute. (1976). *New opportunities for residential development in central cities.* Report No. 25. Washington, D.C.

U.S. Department of Education. (2014). The condition of education 2014. National Center for Education Statistics. Retrieved from http://nces.ed.gov/pubs2014/2014083.pdf

Van Wilsem, J., Wittebrood, K., & De Graaf, N.D. (2006). Socioeconomic dynamics of neighborhoods and the risk of crime victimization: A multilevel study of improving, declining, and stable areas in the Netherlands. *Social Problems,* 53(2), 226-247.

Veysey, B.M., & Messner, S.F. (1999). Further testing of social disorganization theory: An elaboration of Sampson and Grove's "community structure and crime". *Journal of Research in Crime and Delinquency,* 36(2), 156-174.

Warr, M. (1993). Age, peers, and delinquency. *Criminology*, 31(1), 17-40. doi: 10.1111/j.1745-9125.1993.tb01120.x

Weisman, J. (2013, April 17). Senate blocks drive for gun control. *The New York Times.* Retrieved from http://www.nytimes.com/2013/04/18/us/politics/senate-obama-gun-control.html?pagewanted=all&_r=0

Wilson, W.J. (1987). *The truly disadvantaged: The inner city, the underclass, and public policy.* Chicago: The University of Chicago Press.

Wilson, W.J. (1996). *When work disappears*. New York, NY: Knopf.

Wootton, B. (1962). *The social foundations of wage policy*: *A study of contemporary British wage and salary structure*. London: Unwin University Press.