

VIOLENT DELINQUENCY IN AMERICA

THE DETERMINANTS OF CARRYING FIREARMS AMONG JUVENILES: A
THEORETICAL COMPARATIVE ANALYSIS

by

DOUGLAS SCOTT LARSON WALLACE

B.S., Missouri Southern State University, 1993
M.A., Kansas State University, 1997

AN ABSTRACT OF A DISSERTATION

submitted in partial fulfillment of the requirements for the degree

DOCTOR OF PHILOSOPHY

Department of Sociology, Anthropology and Social Work
College of Arts and Sciences

KANSAS STATE UNIVERSITY
Manhattan, Kansas

2009

Abstract

This study examined three of the prominent theories of juvenile delinquency to determine principle juvenile firearm carrying behaviors. The theories investigated were Differential Association/Social Learning, Social Control, and Anomie/Strain. The data set used for this research was the “National Survey of Weapons-Related Experiences, Behaviors, and Concerns of High School Youth in the United States, 1996” from the Inter-University Consortium for Political and Social Research at the University of Michigan. This national-level survey of youth was conducted by Joseph F. Sheley and James D. Wright to assemble detailed behavioral and attitudinal data concerning weapons and violence, and was completed by 733 10th and 11th grade male high school students. Comparison logistic regression model analyses were utilized to examine the study’s hypotheses. Findings indicated that juvenile firearms carrying is most influenced by delinquent peers, delinquent friends, and gang membership within the theoretical framework of Differential Association/Social Learning. Social Control Theory has the least explanatory power, while the analysis of Anomie/Strain suggests that vicarious strains (those strains experienced by people close to the juvenile) have even more influence on juvenile firearms carrying than experienced strain. Theoretical integration is recommended for future research attempting to provide greater explanatory and predictive power for serious forms of delinquency like juvenile firearms carrying.

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Approved by:

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Dr. W. Richard Goe

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Table of Contents

List of Figures	ix
List of Tables	x
Acknowledgements.....	xi
Dedication	xiii
CHAPTER 1 - INTRODUCTION.....	1
Foundation for the Current Research.....	3
Case Study Analysis of School Violence Related to Juvenile Firearms.....	6
Rationale for Researching Juveniles Firearm Carrying.....	17
The Organization of the Dissertation.....	19
CHAPTER 2 - LITERATURE REVIEW.....	21
Introduction.....	21
Historical Roots and Main Contributors of Differential Association/Social Learning Theory.....	21
Contributions of Edwin Sutherland	21
Contributions of Donald Cressey and David Luckenbill.....	23
Critique of Differential Association Theory.....	25
The Development of Social Learning Theory	25
Demographic Variables Related to Social Learning Theory	26
Social Learning Theory and the Determinants of Juveniles Carrying Firearms.....	27
Historical Roots and Main Contributors of Social Control Theory.....	28
Social Control Theory as an Alternative to Strain Theory	29
Contributions of Albert J. Reiss, Jr. and F. Ivan Nye	30
Contributions of Walter Reckless	31
Contributions of Gresham Sykes and David Matza.....	32
Contributions of Travis Hirschi	33
Social Control Theory and the Determinants of Juvenile’s Carrying Firearms.....	34
Historical Roots and Main Contributors of Anomie/Strain Theory	35
Robert Merton and Strain Theory.....	41

Furthering the Ideas of Robert Merton	44
Contributions of the Chicago School, Albert Cohen, Richard Cloward, and Lloyd Ohlin	45
Chicago School	45
Albert K. Cohen	47
Richard Cloward and Lloyd Ohlin.....	48
Current Issues in the Resurgence of the Strain Perspective.....	49
Non-Theory Specific Determinants of Carrying Firearms	58
Variables Regarding the Prevalence of Juveniles’ Access to Firearms	61
STATEMENT OF HYPOTHESES AND DESCRIPTION OF RESEARCH METHODS	64
Present Study	64
Theoretical Contrast and Comparison	64
Purpose of the Study.....	70
Research Questions.....	71
Hypotheses.....	71
Data and Research Methods	73
Measurement of Dependent Variable	74
Measurement of Independent Variables	74
Theoretical Variables	75
Differential Association/Social Learning Theory.....	75
Social Control Theory.....	78
Strain Theory	82
Control Variables	84
Method of Data Analysis	85
CHAPTER 3 - EMPIRICAL FINDINGS.....	87
Descriptive Statistical Analysis	87
Bivariate Correlational Analysis.....	90
Findings from the Logistic Regression Analysis.....	95
CHAPTER 4 - DISCUSSION AND CONCLUSIONS.....	108
Outcomes of Hypothesis Tests	108

Discussion.....	109
Findings of the Explanatory Power of the Theories	111
Discussion of the Most Significant Findings.....	115
Limitations of the Study	118
Recommendations for Future Research.....	119
Theory Integration	120
Types of Theory Integration	121
Research Attitudes Towards Theory Integration.....	122
The Future of Theory Integration and Juvenile Firearms Carrying.....	124
Policy Implications	125
REFERENCES	127
APPENDIX A - DESCRIPTION OF MEASURES	144
Dependent Variable	144
Differential Association/Social Learning Variables.....	144
Delinquent Peers Scale	144
Delinquent Friends Scale	146
Social Control Variables.....	149
Commitment to Conventional Education	150
Strain Variables.....	154
Experienced Strain Scale	154
Vicarious Strain Scale	160
Anticipated Strain Scale	163
Neighborhood Strain Scale	166
Control Variables.....	169

List of Figures

Figure 3.1 Variables for Analyses Drawn from the Three Theories.....	76
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List of Tables

Table 4.1 Descriptive Statistics.....	88
Table 4.2 Bivariate Correlations Among Study Variables	93
Table 4.3 Regression for Differential Association/Social Learning Theoretical Variables	97
Table 4.4 Regression for Social Control Theoretical Variables	98
Table 4.5 Regression for Strain Theoretical Variables	100
Table 4.6 Regression for Control Variables	101
Table 4.7 Regression for Diff. Association/Social Learning, Social Control, and Strain Theories.....	102
Table 4.8 Regression for Full Model.....	105
Table 5.1 Outcomes for Study Hypotheses.....	117

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Dedication

This dissertation is dedicated to my most prized possession, my family.

Lisa Michelle Larson Wallace, my wife and soul mate,

And my delightful children,

Brianna Elisabeth Larson Wallace

Alexis Page Larson Wallace,

Brock Douglas Larson Wallace

CHAPTER 1 - INTRODUCTION

Juvenile violence in America is a menacing problem affecting a wide range of people. Victims and offenders are the obvious casualties but friends, classmates, families, and entire communities also suffer. In fact, the entire nation has become alarmed, especially when it comes to juveniles and firearms. General firearms violence has obtained considerable notice from researchers and politicians over the last several decades, with specific attention being granted to juvenile offenders who made up a considerable proportion of the rise in firearms violence (Wellford, Pepper, and Petrie 2004; Snyder and Sickmund 2006; Fox and Zawitz 2007; Watkins, Huebner, and Decker 2008).

Karr-Morse and Wiley (1997) commented in the late 1990s that concern over this issue was appropriate because violent crime committed by juveniles had quadrupled over the last 25 years. The initial rise of public awareness began in the 1980s due to increasing rates of weapon-associated juvenile crime and gun violence (Snyder and Sickmund 2000; Finkelhor and Ormond 2001; Cornell 2006). According to Stuart Greenbaum reporting for the Office of Juvenile Justice and Delinquency Prevention (1997), during the 1980s the homicide death rate by firearms of juveniles ages fifteen to nineteen increased by 61 percent, while during the same time period the non-firearms homicide decreased by 29 percent; and throughout the time from 1983 to 1995, the proportion of homicides where a juvenile used a firearm increased from 55 percent to 80 percent. According to Mark Bracher, the adolescent homicide rate increased 168% in the short period of 1985-1990 (2000: 189). The Federal Bureau of Investigation reported that the number of juveniles arrested for committing a serious violent crime, including

murder, rape, robbery, and aggravated assault, increased by 50 percent between 1987-1991, while the number of juveniles arrested for murder alone increased by 85 percent during this time frame (FBI Uniform Crime Reports, 1989, 1991, 1993). The rate of violent deaths among juveniles continued to rise throughout the 1990s (Davis 1998). According to the criminal justice section of research completed by the American Bar Association in August 1997, the total arrests of juveniles between 1986-1995 rose 30 percent and the arrests of juveniles involved in violent crimes rose 67 percent. Between 1980 and 1997, seventy-seven percent of juveniles ages fifteen and older who were killed by another juvenile were killed with a firearm (Center for Disease Control and Prevention 1997). In 1999, 53 percent of the 1,800 juveniles murdered were killed with a firearm (Snyder 2001). The most recent data from the Center for Disease Control (2009) reports that among homicide victims ages ten to twenty-four, 84 percent were killed with a firearm.

According to Wintemute and associates (1999), this increase in violent deaths is almost entirely the result of increased availability and use of firearms, specifically handguns, during arguments and fights among teenagers. During this period juvenile homicide involving knives and other weapons remained constant, while firearms homicide increased (Wilkinson and Fagan 2001). Homicide has become the second-leading cause of death for young people between the ages of 15 and 24, and the third leading cause of death for those aged 10 to 14 (Bracher 2000). In fact, firearms used in homicides, as well as suicides and unintentional deaths, have become second only to automobiles as the apparatus involved in the deaths of juveniles ages ten through nineteen (Prothrow-Stith and Spivak 2004). And in a study specifically looking at the

determinants of juveniles firearm carrying, it is also noteworthy that some of the data demonstrate homicides of juveniles ages fifteen to seventeen were more likely to involve a firearm than were homicides of adults (Centers for Disease Control and Prevention 1997).

Foundation for the Current Research

Violent behavior among juveniles in the United States has been a long standing problem in the metropolitan areas for several decades, with the largest concern concentrated in inner-city, urban ghettos. Karen Kinnear (1995), who writes extensively about juvenile violence, once claimed that youth violence was the single greatest problem America was facing. Cook and Laub (1998) went as far as describing this increase in youth violence as an unprecedented epidemic.

Violent behavior among America's youth began increasing and spreading to the suburban and rural regions at a time when overall violent crime was on the decline. For example, the overall violent crime rate fell 44 percent between 1993 and 2000 (Rennison 2001), though both adolescent violence and violent crime in rural areas has been on the rise (Spano and Nagy, 2005). These figures, along with the increased use of firearms in juvenile violence, have created an almost frantic concern among parents, teachers, school administrators, law enforcement authorities, criminologists, and many other community and national leaders.

The inspiration for this dissertation was a rash of violent delinquency that resulted in student murders in non-metro (rural) towns such as Pearl, Mississippi, Paducah, Kentucky, Jonesboro, Arkansas, Edinboro, Pennsylvania, and Littleton, Colorado in the mid to late 1990s. According to Harvard Professor Katherine S. Newman, "The 1997-

1998 academic school year left a bloody trail of multiple-victim homicides in communities that imagined themselves violence free” (2004: 47). All across this country, parents are apprehensive about sending their youth to school, feeling they are no longer protected from intimidation, injury, or death either on their way to and from school or once they get inside the school building (Hill and Drolet 1999). The attention given to the school shootings in various non-metropolitan areas of the United States in the latter half of the 1990s brought renewed concern and awareness about the carrying and use of firearms by juveniles (Cornell 2006). Since school violence is just another form of juvenile violence it becomes essential to understand this problem in the larger context of juvenile crime, which includes the carrying and use of firearms.

Between 1992 and 2001, thirty-five incidents took place in which juveniles showed up at their school or school-sponsored event and used firearms to attack schoolmates and teachers with deadly force (Moore, Petrie, Braga, and McLaughlin 2003). In this context, Moser and Frantz stated that “Times have changed so that what once would have been a fistfight in a school yard can become a bullet-ridden bloodbath” (2000: xi). In the 2001-2002 school year, 2,554 students were expelled for firearms violations (Gray-Adams and Sinclair 2004). From 1999 to 2006, 65 percent of school associated homicides included gun-shot wounds, 27 percent involved stabbing or cutting, and another 12 percent involved physical beating (Center for Disease Control 2008).

Parents and educators became concerned as they realized the dilemma of school violence is migrating out from the inner city to non-metropolitan regions (Sheley and Wright, 1998). “Safe-havens” of rural and suburban America, where people migrated, partially at least, to escape the danger and fear of inner-city crime, now seemed

vulnerable and unsafe. Katherine Newman, co-author of the book *“Rampage: The Social Roots of School Shootings”* described the trend this way, “To many, it seemed suddenly, mysteriously, the scourge of deadly youth violence had burst free of poor and minority neighborhoods and came calling in the kinds of comfortable communities that residents believe are perfect places to live” (2004: 48). Dangerous and violent outbreaks are no longer associated only with urban gangs. Many recent events of school violence have uncovered the reality of a new perpetrator, the isolated, withdrawn juvenile, often using firearms in their attacks (Moser and Frantz 2000). These young people have been described as “nice looking” kids, from “nice looking” families, living in “nice” communities, yet they face problems and struggles (strains) that most adults can’t even imagine. Some of these youth will demonstrate aggressive and violent behavior resulting from their anger, grief, fear, and pain (Prothrow-Stith and Spivak 2004). The volume of school shootings across the country appeared to skyrocket between 1997 and 1999, scaring small town America and forcing the acceptance that violence of this scale could happen in any community. According to Cornell (2006), authority figures and researchers such as Princeton criminologist John J. Julio, Jr. were well intentioned in their work but incorrect in predicting a new breed of superpredators. Juvenile violence and firearms carrying might be better understood by examining cultural shortcomings and theoretical explanations for these frighteningly violent episodes.

To draw a contrast to earlier times in American schools, discipline problems in the 1940s included “talking, chewing gum, making noise, and running in the halls” (Nims 2000: 4). Dress code violations were listed as the number one disciplinary issue in the 1970s, while in the 1980s school fighting rose to number one. According to Elliott,

Hamburg, and Williams (1998), since the late 1970s there has been an almost epidemic increase of youth crime in the United States. By the 1990s, such things as weapons in school, gangs, drug abuse, alcohol abuse and absenteeism became primary concerns for school officials regarding discipline and student behavior (Nims, 2000).

Case Study Analysis of School Violence Related to Juvenile Firearms

Briefly listing some of the more violent episodes of juvenile firearms carrying and use over the last thirty years will contribute to the understanding of the magnitude of this problem and the benefit of applying three theoretical perspectives (described in Chapter Two) to the explanation of juvenile firearms carrying.

On December 30, 1974, eighteen year old Anthony Barbaro from Olean High School in Olean, New York, told his ten year old brother that he was going target shooting. Instead, he drove to his high school, which was closed for the winter holidays, and set off a smoke bomb. When a school custodian investigated, Barbaro shot him dead, then fired from a third-floor window at firefighters and passers-by, killing two more people and wounding nine. Barbaro was an honor student, a member of the National Honor Society, and a college scholarship winner. His teachers called him brilliant and considerate. He later hung himself while awaiting trial (Moore, Petrie, Braga, and McLaughlin 2003; Newman 2004; Lieberman 2008).

On May 19, 1978, thirteen year old John Christian from Austin Junior High School in Austin, Texas, walked into his eighth grade English class and shot his 29 year old teacher in front of 30 classmates. He then dropped the rifle and fled the room but was captured by a school coach who held him until police arrived. Christian was an honor

student and the son of former press secretary to President Lyndon B. Johnson, George Christian (Lieberman 2008).

On March 19, 1982, seventeen year old Patrick Lizotte from Valley High School in Las Vegas, Nevada, shot and killed his psychology teacher and wounded two students. He was often bullied and the day of the shooting was very distraught over a public speaking assignment that was due the next school hour. He fled but was shot by a Metro police officer about a mile from the school. He did not die from his injuries and was tried the following year for murder (Moore, Petrie, Braga, and McLaughlin 2003; Newman 2004; Lieberman 2008).

On January 20, 1983, fourteen year old David Lawler from Parkway South Junior High School in Manchester, Missouri, opened fire in a junior high school study hall with two family owned firearms and ammunition he received as a Christmas present. The St. Louis Post-Dispatch reported the shootings were provoked by a remark made by one of the students about Lawler's older brother. He killed one student and wounded another before committing suicide.

On January 21, 1985, fourteen year old James Alan Kearbey from Goddard Junior High School in Goddard, Kansas, walked into his school carrying a rifle and a pistol. When confronted by the principal, he began firing and killed the principal and wounded two teachers and a classmate. Kearbey was said to be a loner with a quick temper and a fascination with guns. He was often teased by other students and not long before the shooting he had been beaten by two classmates in a locker-room fight.

On December 4, 1986, fourteen year old Kristopher Hans from Lewiston, Montana, went to a classroom and attempted to kill a French language teacher who had

flunked him. His regular teacher was in the gymnasium coaching basketball so a substitute teacher was in the room, and he shot her instead. While fleeing the school he fired additional shots and wounded a vice principal and two classmates (Moore, Petrie, Braga, and McLaughlin 2003; Newman 2004; Lieberman 2008).

On December 16, 1988, sixteen year old Nicholas Elliot from Atlantic Shores Christian School in Virginia Beach, Virginia, walked into the school with a semi-automatic handgun hidden in his backpack, looking for a student who had been tormenting him. He killed one teacher and seriously injured another before barging into a classroom full of terrified students. While shooting, his gun jammed and a teacher tackled him, most likely saving the lives of many students (Beeghley 2003; Newman 2004; Lieberman 2008).

On May 2, 1992, twenty year old Eric Houston from Lindhurst High School in Olivehurst, California, returned to his former school the day after threatening to “shoot up a school rally.” He was extremely angry over a recent job loss and blamed a previous Civics teacher who had flunked him, contributing to his not graduating high school. He paced the school looking for his previous teacher and killed him. Following the killing he entered a classroom and took 85 students hostage for over 8 hours before finally surrendering to law enforcement authorities. In addition to the teacher, he killed three students and wounded nine others (Newman, 2004; Lieberman 2008).

On December 14, 1992, eighteen year old Wayne Lo from Great Barrington, Massachusetts and a student at Simon’s Rock College of Bard, an experimental school designed for gifted high school students, walked up to the school security area and shot the female security guard. He then fired at a Spanish language professor driving through

the parking lot and killed a student who heard the car crash and came running to help. He then fired at several students studying in the school library and then went to a dorm and opened fire. He dropped his rifle after it jammed, and then went into the student union and notified law enforcement of what he had done. When it was over he had killed a teacher and a student, while wounding four others (Moore, Petrie, Braga, and McLaughlin 2003; Newman 2004; Lieberman 2008).

On January 18, 1993, seventeen year old Scott Pennington from East Carter High School in Grayson, Kentucky, walked into his seventh period English class with a revolver and shot his teacher in the head. Several students in the class did not initially respond because they thought it was something the teacher had planned for her drama club. However, a custodian was killed when he came to investigate the noise. Pennington then held the class hostage for 40 minutes before he began releasing them a few at a time. After the last five were released he surrendered to police (Moore, Petrie, Braga, and McLaughlin 2003; Newman 2004; Lieberman 2008).

On October 12, 1995, sixteen year old Toby Sincino from Blackville-Hilda High School in Blackville, South Carolina, walked into his math teacher's classroom and shot him in the face in front of a room full of students. Sincino had become very upset about being suspended one week earlier for making an obscene gesture. After the initial shooting he found and shot another math teacher in her workroom before turning the gun on himself (Moore, Petrie, Braga, and McLaughlin 2003; Newman 2004; Lieberman 2008).

On November 15, 1995, seventeen year old Jamie Rouse from Richland High School in Lynnville, Tennessee, walked down the hallway of his school and shot the first

two teachers he saw, killing one and seriously injuring the other. He continued into the crowded cafeteria, where he fired at an assistant football coach, missing him and killing a female student. The terror ended when he was tackled by a teacher and several students (Moore, Petrie, Braga, and McLaughlin 2003; Newman 2004; Lieberman 2008).

On February 2, 1996, fourteen year old honor student Barry Loukaitis from Frontier High School in Moses Lake, Washington, walked into his ninth grade algebra class armed with a high-powered rifle and two handguns and shot a student sitting at a desk. Before he was overcome by a physical education instructor, he endeavored to hold the class hostage, He critically wounded one student, and killed two male students and a teacher (Elliott, Hamburg, and Williams 1998; Capozzoli and McVey 2000; Moore, Petrie, Braga, and McLaughlin 2003; Newman 2004; Lieberman 2008).

On February 19, 1997, sixteen year old Evan Ramsey from Bethel Regional High School in Bethel, Alaska entered the school and went on a 20 minute shooting spree. He killed the school principal and one student-athlete, and injured three other classmates. He held the gun to his head before submitting to law enforcement, but didn't pull the trigger. One female student who claimed to know Ramsey said he had forewarned some friends to his plans several days before the assault but none of them said anything to other students or school officials (Capozzoli and McVey 2000; Moore, Petrie, Braga, and McLaughlin 2003; Newman 2004; Lieberman 2008).

On October 1, 1997, sixteen year old Luke Woodham from Pearl High School in Pearl, Mississippi, strolled into the crowded courtyard just as school buses were arriving at the beginning of the day. He calmly walked up behind and shot a female classmate who was his former girlfriend and then methodically walked around the area randomly

shooting other victims. He killed one more student and wounded seven others. Earlier that morning before going to school, it was discovered he had smothered his mother with a pillow, beaten her with a baseball bat, and stabbed her to death with a kitchen knife (Capozzoli and McVey 2000; Moore, Petrie, Braga, and McLaughlin 2003; Newman 2004; Lieberman 2008).

On December 1, 1997, fourteen year old Michael Carneal from Heath High School in West Paducah, Kentucky, began shooting on students who had just ended a prayer meeting. Carneal had told a student the previous day not to attend that prayer meeting but he did not say why and the student did not tell any school officials. With guns he had stolen he killed three classmates and wounded five others (Capozzoli and McVey 2000; Moore, Petrie, Braga, and McLaughlin 2003; Newman 2004; Lieberman).

On December 15, 1997, fourteen year old Joseph “Colt” Todd from Stamps, Arkansas, stood in a wooded area near the edge of school grounds and shot students walking to class, although none died from their injuries. He later told authorities that he was humiliated by students who bullied him and made him pay them money not to beat him up (Moore, Petrie, Braga, and McLaughlin 2003; Newman 2004; Lieberman 2008).

On March 24, 1998, eleven year old Andrew Golden and thirteen year old Mitchell Johnson from West-side Middle School in Jonesboro, Arkansas, lured their classmates out of the school building and onto the playground by setting off the fire alarm. Running into the trees and finding a shielded position in the woods, they fired approximately 30 rounds into the crowd of teachers and fellow students, killing four students and a teacher and wounding eleven others. Johnson’s girlfriend had recently broken up with him and some classmates reported he had taken it very hard. After a few

other hardships he had told other students that “he had a lot of killing to do.” One specific classmate said Johnson stated he was going to shoot his ex-girlfriend and then kill everyone else in the building. His ex-girlfriend was one of the students wounded in the attack (Elliott, Hamburg, and Williams 1998; Capozzoli and McVey 2000; Moore, Petrie, Braga, and McLaughlin 2003; Newman 2004; Lieberman 2008).

On April 24, 1998, Andrew Wurst from James W. Parker Middle School in Edinboro, Pennsylvania, burst into a school dance with a gun killing one teacher, and wounding another teacher and two classmates. About a month before the shooting, Wurst had bragged to friends that he was going to take his father’s gun to kill the people he hated and then kill himself. He did not follow through with killing himself (Capozzoli and McVey 2000; Moore, Petrie, Braga, and McLaughlin 2003; Newman 2004; Lieberman 2008).

On May 21, 1998, fifteen year old Kip Kinkel from Springfield, Oregon, walked into Thurston High School, calmly walked into his school cafeteria at 8 a.m. and opened fire on 400 students congregating before the beginning of the school day. He had been suspended the day before the attack for bringing a gun to school. After killing both of his parents either the morning of or the night before the attack, he killed two boys and injured 22 others at the school (Capozzoli and McVey 2000; Moore, Petrie, Braga, and McLaughlin 2003; Newman 2004; Lieberman 2008).

On April 16, 1999, sixteen year old Shawn Cooper from Notus Junior-Senior High School in Notus, Idaho, brought a 12-gauge shotgun wrapped in a blanket on the school bus. The gun made it to the school because he simply told the bus driver it was part of a science project. When he got to school he pointed the gun at a school secretary

and a couple of female students. He then shot twice at a door and towards the floor. He surrendered shortly after with no one being hurt, however, a “death list” was found on him during the search (Newman 2004; Lieberman 2008).

On April 20, 1999, eighteen year old Eric Harris and seventeen year old Dylan Klebold from Columbine High School in Littleton, Colorado, entered the school cafeteria with an arsenal of firearms and bombs, and began a four-hour shooting spree that was the deadliest high school massacre. They killed twelve classmates and one teacher, and injured 23 others before they both committed suicide (Capozzoli and McVey 2000; Moore, Petrie, Braga, and McLaughlin 2003; Newman 2004; Lieberman 2008; Cullen, 2009).

On May 20, 1999, fifteen year old Anthony B. Solomon, Jr., known as T. J., from Heritage High School in Conyers, Georgia, entered the commons area of his school and opened fire. He discharged twelve shots from his rifle and then fled from the building. Next he pulled out a handgun and fired three additional shots before kneeling on the ground and placing the gun in his own mouth. He hesitated and did not fire. Rather, he surrendered to school officials and was taken into custody. When all was done no one was killed but six students were injured, one seriously (Moore, Petrie, Braga, and McLaughlin 2003; Newman 2004).

On December 6, 1999, thirteen year old Seth Trickey from Fort Gibson Middle School in Fort Gibson, Oklahoma, walked up to a group of students waiting for the Monday morning bell to ring to start the day and began randomly shooting. He was a well-liked, unassuming young man and no one came forward with any statements saying he was preparing to carry out this attack. After firing 15 shots, he dropped the emptied 9

mm semiautomatic firearms and a science teacher subdued him until law enforcement arrived. Nobody was killed but four were seriously injured (Moore, Petrie, Braga, and McLaughlin 2003; Newman 2004).

On March 5, 2001, fifteen year old Charles Andrew Williams from Santana High School in Santee, California, walked into a boy's bathroom and began shooting indiscriminately. He killed one male student before walking out into the hallway and killing another. He walked back and forth from the bathroom to the hallway several times, reloading and shooting, injuring thirteen more people, including a student teacher and a campus monitor. Williams surrendered when, during a pause in the shooting, police charged the bathroom and found it empty, with him kneeling on the floor with the firearm in his hands (Moore, Petrie, Braga, and McLaughlin 2003; Newman, 2004).

On March 22, 2001, eighteen year old Jason Hoffman from Granite Hills High School in El Cajon, California walked into the school with a single-barrel shotgun looking to shoot the dean of students. He found the administrator but missed when firing upon him. Hoffman continued shooting, injuring five people before being shot and wounded after exchanging shots with a police officer. He later committed suicide in jail awaiting trial (Moore, Petrie, Braga, and McLaughlin 2003; Newman, 2004).

On March 30, 2001, seventeen year old Donald R. Burt, Jr. from Lew Wallace High School in Gary, Indiana went back to school after being expelled and shot another student (Lebrun 2009).

On November 12, 2001, seventeen year old Chris Buschbacher from Caro Learning Center in Caro, Michigan went into the school with a shotgun and a rifle and took two hostages. He only fired two shots during a three hour confrontation. However,

he was very upset over the recent disintegration of a romantic relationship and committed suicide while police were approaching (Lebrun 2009).

On April 24, 2003, fourteen year old James Sheets from Red Lion Area Junior High School in Red Lion, Pennsylvania armed with five handguns killed the middle school principal in front of a large group of classmates in the school cafeteria before shooting himself in the head (Lebrun 2009).

On September 24, 2003, fifteen year old John Jason McLaughlin from Rocori High School in Cold Spring, Minnesota waited for a classmate who had been bullying him to come out of the school locker room. His initial shot wounded his intended target but a second shot missed and killed another student standing close by. McLaughlin chased the first student into the gymnasium and shot him in the forehead. He then removed the rest of the bullets from the firearm and dropped it. A gym coach then secured the weapon and escorted him to authorities (Lebrun 2009).

On March 21, 2005, sixteen year old Jeff Weise from Red Lake Senior High School in Red Lake, Minnesota first shot his grandfather and the grandfather's girlfriend before driving to the school in his grandfather's patrol vehicle and crashing it into the building. Wearing a bullet-proof vest he began shooting at whoever crossed his path. He killed seven people, including a teacher and a security guard, and injured five other students. When police arrived he momentarily exchanged gunfire with them before turning the gun on himself (Lebrun 2009).

On November 8, 2005, fifteen year old Kenny Bartley, Jr. from Campbell County Comprehensive High School in Jacksonboro, Tennessee brought a .22 caliber pistol onto school grounds. Several students saw the gun and reported him to school authorities.

While being questioned about it he opened fire, killing an assistant principal and wounding two other administrators while they were wrestling the gun from him (Lebrun 2009).

On September 29, 2006, fifteen year old Eric Hainstock from Weston High School in Cazenovia, Wisconsin entered the school's main hallway with a .22 caliber revolver and a shotgun. He shot at and missed a social studies teacher before a school custodian wrestled the shotgun from him. As the school principal approached him he pulled out the revolver and shot him three times. The principal swept the gun away from Hainstock while several others subdued him. However, the principal died several hours later at an area hospital (Lebrun 2009).

On January 3, 2007, eighteen year old Douglas Chanthabouly from Foss High School in Tacoma, Washington shot another male student in the school hallway near the auto shop room just as class was about to resume the first morning back from winter break. He shot his classmate in the face in a crowded hallway full of students and teachers for no known reason. Initially Chanthabouly was said to be too mentally unstable to be held accountable, but that opinion was later changed. He was tried as an adult and given 23 years in prison (Lebrun 2009).

On October 10, 2007, fourteen year old Asa H. Coon from Success Tech Academy in Cleveland, Ohio paced the halls with a firearm in each hand shooting at classmates and teachers. He had previously been in trouble for domestic violence at his residence and had recently been suspended for a fight at school. He wounded five people in the ordeal but he was the only fatality, killing himself in a classroom.

On February 12, 2008, fourteen year old Brandon McInerney from E. O. Green Junior High School in Oxnard, California specifically targeted another male student and shot him twice in the head with a .22 caliber revolver. Following the shooting McInerney pitched the gun to the floor and left. He was picked up shortly about seven blocks from the school.

Finally, on September 16, 2009 a sixteen year old male student from Virginia Randolph Community High School in Glen Allen, Virginia was arrested for firing shots at other students in the high school parking lot. He was captured about 200 yards away from the school in nearby woods.

Rationale for Researching Juveniles Firearm Carrying

The timeline of these violent incidents, all involving juveniles carrying and discharging firearms, points to the importance of conducting research in this area. It should be pointed out that at the time of this ascension of inappropriate student behavior and high-profile school shootings there exists in a larger national context the escalation of violent crime committed by adolescents in general. However, in response to the rising fear by parents and educators it has been argued that some government agencies have attempted to offset this notion by releasing statistics demonstrative of declining rates of juvenile homicide and school violence. For example, at the height of this tragic dilemma, the Uniform Crime Reports conveyed a decrease in violent crimes by juveniles from 1995 to 1997. However, this FBI report seems to contradict a study commissioned and published in late 1996 by the American Sociological Association overlapping the same period. “In particular, the (ASA) report emphasizes that U.S. teenagers have increasingly become both the victims and perpetrators of violent crime and that youth violence is

growing more rapidly than [violence by] any other subgroup” (Messerschmidt 2000: 3). John Dilulio, who is a former Princeton sociology professor, in response to the suggestion of a statistical decrease in violence committed by teens, claimed that we are simply experiencing “a lull before the storm” (Karr-Morse and Wiley, 1997). Criminologist Elliott Currie suggests that an increasing strain on middle-class youth in America may be contributing to juvenile violence. Currie points out the familiar list of things to blame, “the erosion of discipline, a growing spirit of leniency and indulgence, an emphasis on children’s rights over their responsibilities, the weakened authority of parents and schools, and a timid juvenile justice system” (2004: 5-6).

Regardless of the debates over the reporting on juvenile violent crime, there is a continuing concern over firearms and juveniles. This increased concern provided the incentive for a study comparing the nature and causes of firearms carrying by juveniles. The sociological descriptions of crime have been dominated by the three main theoretical traditions of differential association/social learning, social control, anomie/strain. Other theories have been introduced but customarily have employed concepts from one of these three traditions, or have been developed to unequivocally challenge them (Cullen and Agnew 2006). And, while high-profile juvenile violence, including their carrying and use of firearms, has garnered attention from public authorities and media types, as well as sociologists and criminologists, much of the research in this area has not been solidly connected to any specific theoretical orientation. In addition, much of the research looking at juveniles and firearms has focused on the issue of gun ownership rather than carrying (Lizotte and Sheppard 2001). Few studies have looked at the causes and

correlates of juvenile firearms carrying, and research findings regarding the determinants of juvenile firearms carrying have little consistency.

A major goal of this dissertation is to address these shortcomings by examining the utility of the theoretical perspectives of differential association/social learning, social control, and anomie/strain in identifying the determinants of juvenile firearms carrying (other than gun ownership). A second goal is to determine which theoretical perspective provides the best explanation for this problem. This will be carried out by using a statistical model developed from the “*National Survey of Weapons-Related Experiences, Behaviors, and Concerns of High School Youth in the United States, 1996*,” a data set available from the Inter-University Consortium for Political and Social Research located at the University of Michigan. This data set was chosen because it provides wide-ranging information on weapon-related behaviors among American juveniles that until recently has been scarce in existing research. Further, it represents a broad sample of high-school aged youth, and provides diverse information including historical circumstances, cultural diversity, urban and non-urban mix, class, race, and socioeconomic status.

The Organization of the Dissertation

The remaining chapters of this dissertation are assembled in the following manner: Chapter Two provides a discussion of the development of the theories of differential association/social learning, social control, and anomie/strain to provide a foundation for this study. This is followed by a review of the literature on juvenile firearms carrying. Chapter Three states the research hypotheses and describes the research methods. This includes a discussion on why these three theoretical perspectives were chosen, how they are different from one another, and how they are relevant to the

problem of juvenile firearms carrying. Further, it includes a description of the database, the operationalization of the study variables, and the statistical methods used. Chapter Four presents the research findings. Finally, Chapter Five discusses the findings from the analysis, assesses whether the hypotheses laid out were confirmed or rejected, and provides the implications of the study for future research.

CHAPTER 2 - LITERATURE REVIEW

Introduction

This chapter reviews the literature concerning the theoretical traditions of Differential Association/Social Learning Theory, Social Control Theory, Anomie/Strain Theory and the determinants of carrying firearms by juveniles. The sections of this chapter will include the historical roots and main contributors of each of these three theoretical perspectives, as well as a review of empirical research related to the determinants of firearms carrying among juveniles.

Historical Roots and Main Contributors of Differential Association/Social Learning Theory

Contributions of Edwin Sutherland

In many circles Edwin Sutherland is widely recognized as the most important criminologist of the 20th century. Sutherland was born and raised, as well as educated, in a very religious, rural Midwestern setting (Schuessler 1973: x). His father was a minister, a college professor, and a college president who was known to be a very strict and stern disciplinarian. In fact, Mark Gaylord and John Galliher (1988) offered the belief that Sutherland's father was very influential in shaping his critical posture regarding theory and evidence. He received his doctorate from the University of Chicago in 1913 and held a succession of academic positions, including stints at the University of Illinois and the University of Minnesota. He then taught at the University of Chicago from 1930 to 1935 but left five years later to join the faculty at Indiana University, where he stayed until his death in 1950. Apparently he became disillusioned with his position in

Chicago, citing “certain distractions,” but maintained many of his friendships within the Chicago School for the remainder of his life (Vold 1951; Geis and Goff 1983).

Sutherland did pioneering sociological studies in the areas of professional theft and white-collar crime. However, he is best known for developing the general sociological theory of crime and delinquency known as “differential association.” The major influences on Sutherland’s thinking came from the scholarly works of the Chicago School, with special emphasis on W. I. Thomas (Schuessler 1973: xi). Other work from the research of the Chicago School that influenced Sutherland included George Mead, Robert Park, and Ernest Burgess’s studies of the city as a multi-faceted organism, and the ecological work of Clifford Shaw and Henry McKay.

Sutherland drew the theoretical inspiration for developing differential association from the Chicago School’s ecological and cultural transmission theory, symbolic interactionism, and culture conflict theory. He wanted to formulate a theory that would explain individual criminal behavior and the disparity in society’s group crime rates. In doing this he took into consideration that delinquent behavior is not necessarily different from conventional behavior and realized that community standards and values are imperative in determining behavior. In addition, certain locations and individuals are more crime-prone than others.

According to Sutherland, the term “differential association” meant “the contents of the patterns presented in association” would differ from one person to another (Sutherland 1939: 5). By this he never meant that simple involvement or “association” with delinquents would produce criminal behavior. Rather, he gave principal focus to the subject matter of communications between individuals. Also, he saw crime as a

consequence of conflicting values, where the individual was involved in behavior approved by their personal cultural associations but disapproved by the laws of the larger societal context. Sutherland summarizes, “Systematic criminal behavior is due immediately to differential association in a situation in which cultural conflicts exist, and ultimately to the social disorganization in that situation” (1939: 9).

Contributions of Donald Cressey and David Luckenbill

Sutherland’s theory of differential association went through various stages of development. He authored a criminology textbook that remained a leading text in the field for over 30 years, and only in this textbook did he fully state his theory. In 1947, in the 4th edition of *Principles of Criminology*, he narrowed down the major statements that define his theory into nine propositions. Donald R. Cressey, a colleague and partner of Sutherland, continued to update and revise *Principles of Criminology* from the 5th through the 10th editions (Sutherland and Cressey 1978). Throughout this period Cressey was the leading advocate of differential association, regularly clarifying and defending it. At one point he even discussed it in the context of social learning, saying, “The content of learning, not the process itself, is considered the significant element of determining whether one becomes a criminal or non-criminal” (Sutherland and Cressey 1960: 58). After Donald Cressey’s death, David F. Luckenbill continued the work of Sutherland and Cressey, revising and publishing the textbook’s final edition (Sutherland, Cressey, and Luckenbill 1992). Demonstrating the respect of the contributions and the great tradition the theory had become, through all the updates and revisions, neither Cressey nor Luckenbill changed anything about the original nine propositions in the 1947 statement.

The first proposition states that “Criminal behavior is learned” (Sutherland and Cressey 1970: 75). The second, third, and fourth propositions state that this learning of delinquent behavior occurs through the interactions of communication with intimate personal groups and includes motives, rationalizations and techniques necessary for delinquency. The fifth proposition says, “The specific direction of motives and drives is learned from definitions of the legal codes as favorable or unfavorable” (Sutherland and Cressey 1970: 75).

The most quoted and essential of the nine propositions is the sixth one, which states, “A person becomes delinquent because of an excess of definitions favorable to violation of law over definitions unfavorable to violation of law” (Sutherland and Cressey 1970: 75). Simply stated, people become criminals because of an overexposure to associations conducive to delinquency. Sutherland and Cressey make the statement, “The theory of differential association is concerned with ratios of associations with patterns of behavior, no matter what the character of the person presenting them,” (1970: 79).

Proposition seven claims that these associations may vary in how often they have contact, how long the relationship is, how early one is introduced to the definitions favorable or unfavorable to law breaking, based on the assumption that behaviors learned early in life will persist over time and are more influential than those presented later and finally, the strength of the emotional reactions related to the associations (Sutherland and Cressey 1970).

The eighth and ninth propositions imply that there is not any special process in which criminal behavior is learned. Proposition nine states, “While criminal behavior is

an expression of general needs and values, it is not explained by those general needs and values, since noncriminal behavior is an expression of the same needs and values” (Sutherland and Cressey 1970: 76). Fundamentally, the eighth and ninth propositions suggest that learning delinquency is basically the same as learning any other behavior.

Critique of Differential Association Theory

Differential association remained popular but did receive some critical evaluation. Some considered it difficult to test because the main concepts of the theory were vague and hard to define (Akers 1998: 33). Others criticized Sutherland for a failure to specify the mechanisms by which the learning of criminal behavior took place and said the ratio of definitions favorable to or unfavorable to crime would be nearly impossible to measure in the precise way the theory suggests (Cressey 1952). Several theorists have suggested possible revisions to the original theory of differential association in an attempt to address these criticisms (Sykes and Matza 1957; Glaser 1960; Jeffery 1965; Burgess and Akers 1966b; Heimer and Matsueda 1994). Expounding on these criticisms, Robert Burgess and Ronald Akers believed Sutherland had neglected to integrate the knowledge of the learning process developed by the behavioral psychologists utilizing operant conditioning. Including these research developments, differential association progressed into the sociological component of Social Learning Theory.

The Development of Social Learning Theory

Social learning theory is principally an extension of Sutherland’s differential association which took on two main extensions. The first extension was developed by C. Ray Jeffery as a direct application of popular operant-based learning theories from psychology. The other, which has received wide acceptance among criminologists is

Ronald Akers's social learning theory. Both of these theories draw heavily from the two general forms of behavioral psychology: the Skinnerian or operant theory (originally developed by B.F. Skinner) and social learning theory. Jeffery (1965) relies most on the operant approach which allows only for direct material sources of reinforcement and punishment, while Akers (1973) relies more on the social versions of learning, which begin with Skinner's theory and then adds the concept of indirect social stimuli and cognitive processes. Jeffery's theory eventually became known as differential reinforcement but he received much criticism from Burgess and Akers (1966a; 1966b) when he proposed to replace all of Sutherland's theory with a single statement of operant conditioning. As Burgess and Akers rejected this notion, they chose to retain all the major features of Sutherland's theory in their own work.

Demographic Variables Related to Social Learning Theory

Akers's social learning (1973, 1998) demonstrates the likelihood that delinquent behavior increases as a juvenile associates with people who have favorable attitudes toward delinquency. Akers also contends that juvenile delinquency increases as juveniles are exposed to delinquent role models and they perceptively obtain greater rewards than punishment for delinquent behavior. According to Akers (1998), associations that begin early in life and occur repeatedly over an extended period of time with great intensity, are likely to have the greatest influence on juvenile attitudes and behaviors. Consequently, primary groups such as family and peers are likely to demonstrate the strongest effect on delinquent attitudes and behaviors among juveniles.

Older siblings are obviously categorized as family but can have the same impact on adolescent siblings as peers. Juveniles are influenced by the attitudes and behaviors of

older siblings, even if they do not directly participate in those siblings' actions. As a result, older siblings often serve as role models for younger siblings. However, even though many studies have found that juveniles are more likely to be involved in delinquency if they have delinquent older siblings (Rowe and Farrington 1997; Brook, Brook, and Whiteman 1999; Slomkowski, Rende, Conger, Simons and Conger 2001). No one has applied this theory to examine the level of influence older siblings have on carrying firearms.

Social Learning Theory and the Determinants of Juveniles Carrying Firearms

During the adolescent years, juveniles often begin to detach themselves from family associations that have contributed greatly to their early development. At this time peer associations can begin to have greater influence and impact than their parents or siblings. Many studies have shown a relationship between peers and juvenile firearm carrying. These studies have suggested that juveniles who carry firearms are inclined to have peers who carry firearms or are more likely to associate themselves with peers who engage in other behavioral problems (Bailey, Flewelling, and Rosenbaum 1997; Malek, Chang, and Davis 1998; Kingery, Coggeshall, and Alford 1999; Lizotte and Sheppard 2001). In addition, Bailey, Flewelling, and Rosenbaum (1997) reported that the strongest predictor of weapon carrying, even after controlling for all other predictors, was the perception by youth who brought firearms to school. These perceptions include perceived self-vulnerability to victimization (i.e. being beaten, stabbed or shot), the need to feel powerful, and/or peer perceptions of firearm carrying. In a similar manner, other studies reported the strongest correlates of juvenile firearm carrying were firearm carrying by family and peers (Sheley and Brewer 1995; Hemenway, et al 1996;

Cunningham, et al 2000). Also, Marrow, McGrady, Myers, and Mueller (1997) reported that weapon carrying juveniles were 19 times more likely to report weapon carrying by peers than those who did not carry weapons. Finally, Simon, Dent, and Sussman (1997) pointed out that the perceptions of peers' carrying firearms to school significantly influenced the firearm carrying behavior of juveniles through the effects of social learning.

Historical Roots and Main Contributors of Social Control Theory

The phrase "control theory" has been used in different theoretical contexts and attempts to explain any perspective that has discourse regarding the control of human behavior (Empey 1978). Even though social control theorists explain criminal behavior in diverse ways, nearly all of them deliberate one basic concept. Rather than asking the common criminological question, "What makes people criminal?," these theorists share an opinion that deviant behavior is the result of our human nature. They then attempt to analyze the social conditions surrounding the individual and answer the question, "Why do people obey rules?" (Hirschi 1969: 10). All theories of social control depend on social factors to explicate the reasons people are restrained from behavior that is detrimental to others.

Emile Durkheim is often referred to as the father of Social Control Theory and gave the earliest explanation of this particular approach (Williams and McShane 1999). He stated that crime is functional and deviance actually assists in maintaining social order. Behaviors that are approved or disapproved are defined by vague moral "boundaries" that are developed by the social reaction of others to a particular behavior. These boundaries then identify the various gradations of disapproval for each behavior,

ranging from mild displeasure to legal sanctions and imprisonment (Durkheim [1895], 1965).

Durkheim also explained that the existence of social controls are noted in the idea of anomie.¹ Specifically, a non-anomic society demonstrates community where social relationships are working well and the social norms are clearly laid out. However, when these relationships and social norms begin to break down, social controls decline in their effectiveness. Durkheim claimed a breakdown of these controls results in crime and delinquency ([1895], 1965). Therefore, behavior is controlled by social reaction (i.e. displeasure, punishment, etc) and the resulting controls are required for social stability to exist.

Various social control theorists express a view of human nature that reflects the viewpoint of the seventeenth-century English philosopher Thomas Hobbes who believed that by nature, humans live in a state of anarchy. Social control theories have also been classified as a socialization theory, stating that people will simply act out their desires in the interest of self-gratification unless significant people and social institutions shape and “control” their desires into normative behavior. Social control theorists study and accentuate the quality of this process (Williams and McShane 1999).

Social Control Theory as an Alternative to Strain Theory

Many early versions of social control theories were originally developed as alternatives to strain theories, also grounded in Durkheimian ideas. These include the theories of Albert Reiss (1951), Walter Reckless (1955, 1961), Gresham Sykes and David

¹ Anomie is a societal condition potentially causing social disorganization and confusion among its members when cultural norms become inadequate for regulating behavior. The state of anomie results when individuals have lost their sense of purpose or direction. According to Robert Merton, anomie produces strain that the individual must cope with one way or another.

Matza (1957), and F. Ivan Nye (1958); and could include the later work of David Matza (1964) and Travis Hirschi (1969), due to their critical analysis of anomie and subculture theories.

Contributions of Albert J. Reiss, Jr. and F. Ivan Nye

Albert J. Reiss, Jr.'s work created a social control theory that set the stage for most of the later research. He merged the concepts of personality and socialization with the work of the Chicago School, writing at length about the importance of personality in the understanding of delinquency. He suggested three components of social control that could explain this process: (1) an absence of the childhood development of appropriate internal controls, (2) a collapse of those internal controls, and/or (3) a nonexistence of, or conflict with, the social rules developed by the individual's relationship to important groups or social institutions of which they are a part (1951: 196). Reiss believed that delinquency would result when any or all of these components were present. These three elements have been used in one way or another by nearly every theorist researching social control since then.

F. Ivan Nye (1958) expanded on Reiss' research, while identifying three key categories of social control that he felt could prevent delinquency: direct, indirect, and internal controls. According to Nye, *direct control* can be implemented through formal or legal sanctions, where punishment is imposed or threatened for misconduct while compliance is rewarded by parents. *Indirect controls* applied by the family were of special significance to Nye. He believed, if the juveniles' need for affection, recognition, and security were met within the family structure, they would abstain from delinquent activity to avoid the pain and disappointment it could cause to parents or those with

whom they had established close relationships. *Internal controls* would also help prevent delinquency as a result of the juveniles' consciences preventing them from participating in delinquency acts (Nye 1958).

Contributions of Walter Reckless

While Nye was devising his control theory, Walter Reckless, with help from his colleague Simon Dinitz, began to formulate what came to be "containment theory" (Reckless, Dinitz, and Murray 1956; Reckless 1961). This theory was constructed on similar concepts of inner and outer controls, which Reckless labeled "inner" and "outer" containments. His further contribution included factors that motivate juveniles to commit deviant acts that he called "pushes" and "pulls." Reckless explicitly viewed his theory as both an explanation of conformity and deviance (1961: 42).

The base proposal of his theory is that the inner and outer pushes and pulls will produce delinquent behavior unless they are offset by inner and outer containment. *Outer containment*, viewed as the social environment, includes such things as supervision and discipline by home and community authorities, equitable opportunities for social activity, and accessibility to alternatives to deviance, all providing strong moral development and group cohesion. *Inner containment* results when, as the product of positive socialization, the individual develops a strong conscience, serving as a buffer between the pushes and pulls of a deviant milieu. These inner containments were presented as elements of the "self" which included self-control, good self-concept, ego strength, well-developed superego, high frustration tolerance, high resistance to diversions, high sense of responsibility, goal orientation, and ability to find substitute satisfaction (Reckless 1961: 44). While Reckless included a discussion of both external and internal controls in his

research, he clearly distinguished the internal controls to be the more significant of the two.

Contributions of Gresham Sykes and David Matza

Gresham Sykes and David Matza brought the emphasis of external social controls into prominence with their research. Their first work on the subject was a critique of Albert Cohen's subculture theory where they describe juvenile delinquency as resulting from the adolescents' use of "techniques of neutralization", which serve as a rationale for committing delinquent acts. In other words, these techniques create the opportunity for juveniles to neutralize their obligation to societal values, freeing them up to commit delinquency. Cullen and Agnew (2006) suggest that these techniques of neutralization may be an essential element of Sutherland's "definitions favorable" to crime and delinquency in Differential Association Theory. However, most criminologists do not see their theory as an extension of differential association, but rather a type of control theory.

The five forms of neutralization are *denial of responsibility*, *denial of injury*, *denial of the victim*, *condemnation of the condemners*, and *appeal to higher loyalties* (Sykes and Matza 1957). These neutralizations are stated to be generally available to juveniles throughout society, not limited to any particular geographic region or population. However, adopting these neutralizing definitions does not require the juveniles to totally reject conventional societal values, or even that they embrace a value system that is in direct contradiction to the culture in general. The techniques of neutralization are merely a set of "subterranean values" that get around conventional values and rationalize delinquency (Matza and Sykes 1961). In Matza's later work

(1964) he added the concept of the “bond to the moral order” in which he explained a tie that existed between individuals and the dominant societal values. In other words, those with greater investments in the conventional social order have the most to lose if they are labeled delinquent.

Contributions of Travis Hirschi

The previous theories of social control were all supplanted by Travis Hirschi’s Social Bonding theory. Like Durkheim, Hirschi alleged that behavior reflects varying degrees of morality. In fact, he argued that the power of internalized norms, conscience, and the desire of approval from others encouraged conventional behavior. Hirschi formulated a social control theory that brought together components from nearly all former control theories, offering innovative methods to explain delinquent behavior. Hirschi’s social bond theory originates with the general proposition that “delinquent acts result when an individual’s bond to society is weak or broken” (1969: 16).

Hirschi characterized the social bond as having four elements, which include attachment, involvement, commitment, and belief (1969: 16-34). “*Attachment* refers to the strength of a person’s ties to others, particularly to other persons who conform to society’s normative standards” (Hirschi 1969: 25). Hirschi argued that the greater the interaction and attachment with community leaders (i.e. parents, teachers and religious authorities) the less likely juveniles are to engage in delinquent behavior. “*Involvement* refers to the proportion of a person’s time engaged in the pursuit of conventionality” (Hirschi 1969: 25). In other words, the more juveniles are occupied in societally approved activities the less time they have to get into trouble. “*Commitment* refers to the degree of which a person is tied to conventional ways of behaving in accordance with the

prevailing norms” (Hirschi 1969: 25). In other words, the more invested the juvenile is in conventional culture the more they have to lose if they digress. The last element is *belief*, which examines the degree in which the individual supports the basic conventional values of society. Hirschi stated, “The less a person believes he should obey the rules, the more likely he is to violate them” (1969: 26).

Social Control Theory and the Determinants of Juvenile’s Carrying Firearms

There have been inconsistent findings in the research regarding the effect of parent-juvenile attachment on weapon carrying. Some studies have suggested a positive relationship with parents that is inversely related to weapon carrying (Bailey, Flewelling, and Rosenbaum 1997; Orpinas, Murray, and Kelder 1999). After controlling for other background variables, the study by Bailey, Flewelling, and Rosenbaum (1997) found that feeling closely attached to parents was a significant predictor of low incidence of firearm carrying. On the other hand, a study by Kingery, Coggeshall, and Alford (1999) reported a positive parent-child relationship was unrelated to firearms carrying.

School environments in which juveniles felt cared about and connected to the teachers and community of the school, showed a negative association with firearms carrying (Mulvey and Cauffman 2001). According to Kingery, Coggeshall, and Alford (1998), juveniles who carry firearms did not feel a personal-social connection to people at their school.

In the involvement bonding influence aspect of Hirschi’s theory, parental monitoring has been negatively related to adolescent’s carrying firearms (Orpinas, Murray, and Kelder 1999; Luster and Oh 2001). In addition, significant research has demonstrated that juveniles, who are supervised by their parents, are less likely to

commit deviant acts and associate with delinquent peers than those who are not supervised by parents (Steinberg 1990; Ary, Duncan, Duncan, and Hops 1999; Petit, Laird, Dodge, Bates, and Criss 2001).

Historical Roots and Main Contributors of Anomie/Strain Theory

Specific contribution of the Anomie/Strain perspective to the study and literature regarding juvenile delinquency relies on its social structural and cultural explanations as to how and why society creates pressure towards crime and delinquency. The strain perspective is a macro-theoretical approach with a structural functionalist heritage that presumes it is worthwhile to account for social deviance according to the consequences it has on the social structure. It is also a positivist theory that differs from theories that see pathology within the individual. The anomie/strain perspective is foremost interested in detecting pathology within the social structure that the individual subsists. As a structural/cultural theory it concentrates on how society is structured and then how the culture surrounding the individual encourages deviance. It is essentially a social structural theory of delinquency that assumes people are prone to deviant behavior if exposed to strain caused by other individuals or institutions (Durkheim [1893] 1935; Merton 1938, 1959).

Strain theory tends to concentrate on factors within the social structure that motivate the individual to engage in delinquency. Strain theory emphasizes a combination of the cultural goal of economic success and cultural views on what constitutes legitimate means of achieving those goals as important structural factors. Strain theories suggest individuals are induced to perpetrate delinquent and criminal behavior. If these provocations did not exist, conformity would predominate. Strain

theorists converge on individuals collectively experiencing pathology, frustration, or mental conflict. Individuals in this “state of mind” often see crime in its various forms, including violent delinquency, as ways to express themselves by making some sort of statement, or as ways of dealing with or getting relief from what they perceive as disturbing them (Williams and McShane 1999). A simple question for researchers in strain theory might be, “Where do these strains come from?” What can be found while studying the way society is structured that has the tendency to manufacture situations and circumstances conducive to delinquency?

The basis for this theoretical conjecture is established in understanding the nature and process of social integration. University of Michigan sociologist Marvin E. Olsen, who promoted anomie theories in the 1960s, stated that anomie theories are functional in nature, and hence, place an emphasis on the role of social interaction in producing harmonious societal conditions (1965). Normative integration and functional integration are the two basic suppositions of how any society or culture achieves and maintains integration.

The normative approach originates by building an assortment of social organizations that support the development of institutionalized normative structures based on a minimum quantity of fundamental values (Olsen 1965). These social organizations may include educational institutions (i.e. primary and secondary schools; colleges and universities), government (i.e. administration and law enforcement), legislative institutions (i.e. court systems), communities (i.e. youth centers and programs), and the like. Functional integration is more of a human ecological approach. “Functional integration exists in a social system, then, to the extent that complementary

activities and relationships among specialized and interdependent parts are established and maintained, so as to satisfy the operational requirements of the system” (Olsen 1965: 39). The breakdown of either of these theoretical components can lead to the anomic conditions favorable for juveniles to feel “lost” or misintegrated, and begin to seek solutions involving delinquency.

A primary concern of sociologists of the late nineteenth and early twentieth centuries was the issue of the “great transformation” from simple, preliterate societies to massive, complex, industrial societies (Polanyi 1944). Sociologist Patricia Venturelli Christensen described it this way:

It can be stated that during the nineteenth century, the North-Western part of the world (Europe and USA) witnessed a rapid shift from ascription to achievement orientation. In correspondence to this significant change, all human relationships were dramatically affected. Authors like Durkheim, Tönnies, Weber, Parsons and many others, witnessed the change and tried to explain it in its causes and consequences in the sociological work. Some of the authors were nostalgic in their approach, others rather more positive towards the possible future developments of humanity and social life. Yet all recognized the novelty of the condition that was unfolding before them (2005: 548).

One of the early figures in sociology Christensen mentions is foundational to the beginning of the theoretical construct of anomie/strain. He is German sociologist Ferdinand Tönnies (1855-1936), who was the product of North European Protestant culture. Tönnies provided as his central idea the concepts of *Gemeinschaft* and *Gesellschaft* as two different types of society with two distinctive modes of mentality and behavior. Tönnies believed the *Gemeinschaft* “community” is a product of nature, while the *Gesellschaft* “society” is an artifact. However, everyone has influences that inspire their original thought and, according to Pitirim A. Sorokin, (Harvard Professor and 55th President of the American Sociological Association), “in its essentials the theory did not

originate with Tönnies. Like many fundamental categories of social thought, it is in a sense eternal, appearing long before Tönnies and reiterated after him.” (Tönnies [translated by Loomis] 1957: vii). Philosophers like Confucius, Plato, Aristotle, Cicero, St. Augustine, and Ibn Khaldun all gave portraits in their writings of both Gemeinschaft and Gesellschaft-like social relationships and community structures (Tönnies [translated by Loomis] 1957: vii).

Tönnies developed the concept of the Gemeinschaft society from the small, rural villages of his boyhood. These homogeneous, pre-industrial communities, roughly translated from German as “communal,” are typified by a deep sense of solidarity and common identity. Social interactions are intimate and personal, with a strong emphasis on shared values and sentiments. The social structure was inclined to be simple but rigid. Social control cannot be efficiently employed by informal methods, so laws and formal sanctions are used to ensure social order. Kinship ties are strong and social life centers on the family. In fact, the community, itself, often resembled a large family. Privacy and individualism are minimal. The participants in a Gemeinschaft community are united to one another as whole entities, in contrast to those in a Gesellschaft setting where individuals interact socially as fragmented parts, where different “parts” of the person emerge dependent on the social role being played (Tönnies 1957). The Gemeinschaft community contains all the personal relationships that are intimate and exclusive, much like the concept of the “primary group” discussed by Charles Horton Cooley (Wirth 1926).

A Gesellschaft society is based more on diverse economic, political, and social inter-relationships, characterized by a strong sense of individualism, mobility, and

impersonality along with the pursuit of self-interest and an emphasis on progress rather than tradition. A person's main connection to a Gesellschaft society directly corresponds to the specific purposes of any organization in which the individual belongs. Tönnies also called them "contractual" or "associational" societies where people share community out of necessity, rather than custom, and are viewed more in terms of their societal roles than as unique individuals. These society types are dedicated to efficiency, rather than sentiment. In addition, the influence and social control of the family and the church is diminished, but individuals are encouraged to think and act as they choose. However, the danger exists with the possibility of increased isolation and alienation, along with limited power to do anything about it. According to Fritz Pappenheim (2000), the principles of the Gesellschaft community are in full effect in today's society, nearly eliminating any visible symbols of previous Gemeinschaft ideology. Although many people try to romanticize the "good old days" of the Gemeinschaft-type societies, especially in regard to how much better they would be for struggling youth, it should be pointed out that the large-scale corporations typical of Gesellschaft societies greatly improved the standard of living.

Two intellectuals who built on the foundational concepts of Tönnies who are originally associated with the early development and study of anomie (later revised to become Strain), are Emile Durkheim and Robert K. Merton. Durkheim first introduced the term anomie in his 1893 book *The Division of Labor in Society*. "As originally coined by Durkheim, the term anomie is a French translation of the Greek *anomia*, which means 'no laws'" (Olsen 1965: 37). In this early writing he described anomie as an "abnormal" form of the division of labor in society and often used the concept to describe

a condition of “deregulation” occurring in society. This anomic division of labor exists whenever societally accepted forms of regulation are no longer effective (Durkheim [1893] 1935).

In Durkheim’s 1897 work *Suicide: A Study in Sociology* he further developed the concept of anomie by defining it as a morally deregulated condition in which people have inadequate moral controls over their behavior. He defined this deregulation in order to explain that the rules of society that normally govern the acceptable day-to-day behavior of people become very weakened, causing community members to not know the norms of conventional standards (Williams and McShane 1999). According to Durkheim, this deregulation, or disconnect from societal rules and expectations, easily contributes to the onslaught of deviant behavior. He felt that individuals could not control their “passions,” so some external force must do it. Durkheim stated “Our capacity for feeling is in itself an insatiable and bottomless abyss” ([1893] 1935: 247). So, “either directly and as a whole, or through the agency of one of its organs, society alone can play this moderating role; for it is the only moral power superior to the individual....” ([1893] 1935: 252).

A major theme of Durkheim’s 1893 work was the evolution of societies from what he called mechanical to organic solidarity. A society with mechanical solidarity would have a more traditional or rural foundation with a simple, non-specialized approach to social interaction (i.e. everyone knows each other and what people expect). This type of society would be characteristic of Tönnies’ *Gemeinschaft* community. Durkheim felt that people in such a society share common tasks that develop similar values that ultimately create very strong social bonds. A society with organic solidarity would have social interactions based on a more complex, highly specialized set of

relationships (i.e. people are introduced based on an individual's needs and the personal skills available to meet those needs). This progression led to Durkheim's notion that society would have less ability to restrain individuals, creating greater levels of delinquency. In a society with mechanical solidarity, the inhabitants conduct themselves in a very similar fashion, living common lifestyles and seeking the good of the group as a whole. One notable exception is that of different role expectations along gender lines. As a society becomes more contemporary, the division of labor becomes much more intricate and the good of the individual rises above the needs of the whole group (Williams and McShane 1999).

Durkheim's analysis here possibly suggests an early explanation of how juveniles, increasingly involved in the complexities and uncertainties of contemporary culture, might experience enough anomie to create anger and despair to the point of acting out violently. He stressed that, as societies moved from mechanical to organic solidarity, people were no longer tied together and strongly influenced by bonds of kinship and friendship. He saw organic society as a contractual one, and in that social environment he saw almost all relationships as contractual in nature. A major concern with societies based on these contractual bonds is that the rules or procedures by which these relationships are formed are constantly changing, and the bonds are often broken.

Robert Merton and Strain Theory

Robert K. Merton (1938) subsequently drew from the concept of anomie in his study of explaining deviance in the United States; however, his perception differed somewhat from that of Durkheim's. Merton, like an entire generation of sociologists doing research at the onset of and during the era shortly following the 1930's Great

Depression (e.g. Park and Burgess 1924; Park, Burgess, and McKenzie 1925; Parsons 1937; Shaw and McKay 1942), developed his theory based on observing the disintegration of many of the social mores considered foundational to traditional American culture. However, Merton was one of the initial researchers to investigate the concept that the pathology which led to deviance was located within the social structure rather than the individual. He goes on to say that a pathological social structure provides an environment conducive to causing strain in particular sectors of society, which ultimately encourages delinquency (Merton 1938). In fact, it was Merton's concern with structural strain that made the theory most widely known as Strain Theory. In his analysis, he separated society's cultural values, or social norms, into two categories: societal *goals* and the acceptable *means* of achieving those goals. Merton pointed out that the attainment of wealth has long been a strongly emphasized goal in America. Put more simply, they were observing the social and cultural changes that accompanied a large scale transformation from an agrarian economy and lifestyle to an industrial economy and lifestyle. However, he also stated that the avenues to this goal have too often been blocked for many. In most cases, these individuals have had deficient access to the culturally acceptable means to attain wealth or, due to their socialization experience, have not developed suitable social skills that would enable them to become achievers.

Although anomie theory is a macro-level theory, Merton muddied the waters a bit by developing what he termed individual modes of adaptation to strain. Merton (1938) illustrates five courses of action or adaptations to this condition of blocked opportunity: conformity, innovation, ritualism, retreatism, and rebellion. The first of the five,

conformity, is the only nondeviant adaptation. Here, individuals pursue legitimate goals and the culturally accepted means to attain them. It is important to note that, while many individuals in the lower class exist in an economic opportunity structure that denies them material success, they still acclimate in a nondeviant manner.

The first deviant mode of adaptation is *innovation* which develops when a person seeks legitimate goals but is obstructed from effectively using culturally accepted means to achieve those goals. For example, “innovators” may turn to organized crime when attempts to become materially successful in culturally approved ways are repeatedly blocked.

Ritualism occurs when culturally prescribed success goals are no longer actively pursued, but the legitimate means for achieving those goals are diligently practiced. The “ritualist” is more eccentric than criminal. According to Merton (1959), the ritualist gets more selfish in their behavior and decides to no longer risk personal harm but would rather simply maintain the status quo of their current living condition. The prevailing premise of this approach is that aiming too high does little more than attract disappointment and potential harm, while the status quo brings contentment and safety. *Retreatism* consists of persons pursuing neither the culturally prescribed goal of success nor the means for achieving this goal, usually due to limited opportunities or a sense of personal incompetence. Among the types of deviants who may be regarded as retreatists are psychotics, outcasts, vagrants, vagabonds, tramps, chronic drunkards and drug addicts (1959: 153). “Dropout” is another label given to retreatists and they are often condemned by society because of their perceived inability or unwillingness to lead “normal, productive lives.” *Rebellion*, the final mode of adaptation, differs from the others in that

rebels have decided that the existing social structure imposes too great of barriers to the culturally sanctioned success goals. As a result, they strike out at society, rejecting society's traditional definitions of "expected goals" and the "acceptable means" of reaching those goals, and replace them with new goals and means.

Furthering the Ideas of Robert Merton

A number of Merton's students subsequently adapted his original theory to address particular elements of American crime. One of these students, Richard A. Cloward, acknowledged that "having identified patterns of disjunction between goals and norms Merton is able to define anomie more precisely: Anomie [may be] conceived as a breakdown in the cultural and social, occurring particularly when there is an acute disjunction between cultural norms and goals and the socially structured capacities of members of the group to act in accord with them" (1959: 166). As a result of his research, Merton concluded that crime and deviance was not a fundamental, built-in part of the individual, but rather a symptom of faulty social structure.

Building upon the work of Durkheim, and specifically Merton, most of the prominent and significant theories of delinquency in American sociology emphasize the unequal opportunity structure among differing social groups. Many of them put forward the notion that these differences in opportunity come from the social structure rather than individual responsibility.

***Contributions of the Chicago School, Albert Cohen, Richard Cloward, and
Lloyd Ohlin***

Chicago School

The explanation of differential opportunity led to a shift in sociological theory as it related to crime and delinquency in the 1950s and 1960s. Most criminological theories being developed at this time focused on juvenile delinquency, specifically looking at urban gangs in an attempt to explain their origin and purpose. In other words, they attempted to determine why these subcultures developed and what benefit they offered the youth involved in them. The major contributors here were Albert K. Cohen (1955) and Richard A. Cloward and Lloyd E. Ohlin (1960). These authors borrowed from and combined the work of Merton with the Chicago School. The school of thought described as “The Chicago School,” developed out of the first department of sociology in the United States, was established at the University of Chicago in 1892. This department laid the foundation for much of American sociological theory and was the dominant force in American sociological thought through the middle of the twentieth century (Williams and McShane 1999). The major early researchers of the Chicago School include Ernest Burgess, George Herbert Mead, Robert E. Park, Walter C. Reckless, Edwin Sutherland, W.I. Thomas, and Louis Wirth. They were drawn to the “fertile soil” of the rapid social change taking place in the city of Chicago. When the city was first incorporated in 1833 it had a meager population of just over 4,000. The population increased to 1 million by 1890, and twenty years later in 1910 it had doubled to 2 million (Palen 1981). Those from the Chicago School believed a city was a “microcosm of the human universe,” and therefore a natural human environment rich in valuable social facts. A recurring thesis

from the Chicago School holds that human behavior is socialized and developed by one's environment rather than their genetic makeup (Williams and McShane 1999).

With the rise of affluence and consumerism in the 1950s due to a booming Post-War economy, researchers like Cohen and Cloward and Ohlin thought American "middle-class" values had proven superior. Consequently, the middle-class way of life became the standard by which people were evaluated. American urbanization was reaching a pinnacle during this period, leaving the central city areas to deteriorate as the suburbs were emerging. Inner-city ghettos resulted and the dilemmas of the city were the problems of its residents. The perception of a strong "we-they" separation gave the middle-class a feeling of superiority over the lower class (Williams and McShane 1999). This "superiority complex," along with middle-class prosperity and the continuing expansion of suburbia, created trust in the progressing existence of "safe-haven" communities that would serve as a refuge for thriving families until their bubble was burst with the escalation of violent delinquency and tragic school shootings beginning in the 1990s.

The philosophy of the 1950s became the widely held belief that these predicaments were the fault of the individual. And if people were not so slothful and simply exerted themselves more towards improving their situation, they would be able to flourish like everyone else. The turbulent times of the 1960s provided the social framework for a change of thought. In the midst of this cultural backdrop, an exchange took place and social conditions and opportunity came to the forefront as being responsible and more explanatory for individual strain and social disconnect. This analysis, summarized as the detection of societal responsibility toward the demands of

what society expects from the individual, served to confirm the significance of Merton's theory and to provide a platform for the materializing opportunity-oriented theories of researchers like Cohen, and Cloward and Ohlin (Lilly, Cullen, and Ball 1995).

Albert K. Cohen

Albert K. Cohen studied under both Merton and Edwin Sutherland. Through his research, he also endeavored to integrate many of the popular theoretical perspectives of the time, including the work of Clifford Shaw and Henry McKay, in addition to that of Merton and Sutherland. Sutherland was the founder of Differential Association theory which also dealt with juvenile delinquency. While a student of Sutherland's, Cohen framed a question that Sutherland's differential association could not sufficiently answer, which became the inspiration for Cohen's most influential work (Cullen and Agnew 2006). In his book *Delinquent Boys: The Culture of the Gang* (1955), Cohen reported that juvenile delinquency is most frequently found in lower-class males in the form of gang activity. He drew immensely from Merton's strain theory in attempting to answer the question: How can we explain the origin and content of delinquent subcultures?

Cohen, like Merton, contended that our reliance on our social environment and our desire to be accepted by it, nurture in us a powerful inducement to choose resolutions for our anxiety (or strain) from already established and accepted societal means. Therefore, delinquency is frequently a result of blocking one's ability to reach societal goals. Cohen also makes the claim that boys, leaning towards delinquency, are not merely affected by Merton's key aspiration of monetary success. On a broader scale, these male juveniles would prefer to attain the acceptance and approval of their middle-class peers (status), which would include respect from others as well as economic

accomplishment. Cohen suggested that all individuals, including juveniles, desire and seek status. In the case of juveniles, not only do they compete against middle-class youth for acceptance and recognition, they are also assessed (or judged) by adults using a “middle-class” measuring rod. So, when juveniles can’t accomplish acceptance and recognition within the established peer groups and/or by the adults in authority, a subcultural group built around deviance arises. According to Cohen, “Insofar as the new subculture represents a new status system sanctioning behavior tabooed or frowned upon by the larger society, the acquisition of status within the new group is accompanied by a loss of status outside the group.....Certain behaviors of conduct, become reputable precisely because they are disreputable in the eyes of the ‘out-group’” (1955: 68).

Although most of Cohen’s work focuses on lower-class, male youths, he also discussed middle-class delinquency to a lesser degree. Cohen perceived middle-class males to be apprehensive regarding their “maleness,” due to the child-rearing responsibilities of their mothers, which he termed status-frustration. The consequence of this, what Cohen called the *reaction-formation*, was a “masculine protest” against female authority that contributed to the development of a middle-class male delinquent subculture.

Richard Cloward and Lloyd Ohlin

The next evolution of the strain perspective comes from the original work of Richard A. Cloward and became known as Differential Opportunity Theory. In discussing Durkheimian traditions, Cloward stated, “...pressures toward deviant behavior were said to develop when man’s aspirations no longer matched the possibilities of fulfillment” (1959: 165). Building on that thought, Cloward’s theory expands the

anomie/strain theory of Durkheim and Merton, combining it with the community-based research and reflections of the Chicago School. Specifically, Cloward (1959) makes the claim that he attempts to consolidate the two major sociological traditions regarding deviant behavior. These two traditions include the anomie/strain tradition of Durkheim and Merton and the cultural transmission/differential association tradition developed largely from the work of Clifford W. Shaw, Henry D. McKay, and Edwin H. Sutherland (Cloward, 1959). In his research, Cloward clearly demonstrated that these two traditions are concrete explanations of the same social concern: juvenile delinquency resulting from limited access to opportunity. The strain perspective focuses on society's legitimate opportunities, or means to reach acceptable goals, whereas, the cultural transmission/differential association perspective focuses on illegitimate opportunities.

This look at the illegitimate opportunity structure became the basis of the theoretical work in the classic book of Cloward and Ohlin (1960). The main point in this writing is that these illegitimate opportunities for juveniles are just as well-defined and established as the legitimate expectations discussed by Durkheim and Merton. How it affects the juvenile is dependent on the degree of integration present in the community. In short, Cloward and Ohlin (1960) suggest that a true understanding the problem of delinquency can be found in the different reactions (adaptations) involved when strain takes place, followed by a classification of the framework in which those reactions emerge.

Current Issues in the Resurgence of the Strain Perspective

Anomie/Strain Theory dominated the research on deviance for several decades leading up to the 1970's, when it then came under arduous attack (Cole 1975; Bernard

1984; Agnew 1992). Some renowned and respected researchers even recommended that the theory be discarded (i.e. Hirschi, 1969, Kornhauser, 1978). However, according to Robert Agnew (1992), Thomas Bernard (1984), and Margaret Farnworth & Michael Leiber (1989), anomie/strain theory endured and survived these criticisms, even though interest in the theory declined temporarily. In fact, Agnew's (1992) work led to a significant resurgence of interest in the anomie/strain perspective.

Although Merton's original anomie theory remains popular, the more known and utilized versions of the perspective used by researchers take on a more general type. In fact, it is the more generalized form of this theory that is widely known as Strain Theory. Criminologists such as Merton, Cohen, and even Hirschi, have used the word "strain" in the descriptions of their work, but this particular classification of the theory wasn't extensively used until Ruth Kornhauser's (1978) critique of the more modern criminological theories. According to D. Wayne Osgood and Jeff M. Chambers (2000), Kornhauser argued that there were "control" and "strain" versions of social disorganization, but she reasoned that the "control" version had the most explanatory power.

Regardless of the ebb and flow of the popularity and acceptance of the strain perspective, from the initial writings of Durkheim and Merton through the most influential strain theorists of today, it has been duly noted that crime and delinquency results from the individual's frustration or inability to achieve monetary success, or other positively valued goals through acceptable or legitimate means. Robert Agnew (1992) introduced a much broader perspective of Strain Theory. Agnew's version includes a deeper analysis than traditional strain theorists, expanding to what he calls General Strain

Theory. While many of the classic strain theories maintain the notion that the chief source of strain or frustration for the individual is the failure to achieve positively valued goals, Agnew (1992) argues that the major source of strain comes as a consequence of negative relationships with others in which that relationship does not provide any desired respect. The one type of negative relationship on which the classic strain theories (Merton 1938; Cohen 1955; Cloward and Ohlin 1960) concentrate is goal blockage encountered by lower-class individuals trying to achieve monetary success or middle class standing. Researchers such as David Greenberg (1977) concentrate on the difficulty some juveniles experience attempting to obtain the financial resources for desired social activities.

The strain perspective expands beyond this focus by reasoning that, although juveniles are at least somewhat interested in monetary success or middle class status, they are more concerned with achieving more urgent goals such as getting along with parents, academic achievement, popularity with their peers, and athletic success (Elliott and Voss 1974; Quicker 1974; Agnew 1984). Other researchers have looked at the strain young males may experience trying to act “manly” or “accomplishing masculinity” in certain environments, stating that when this becomes especially difficult, certain male juveniles respond with delinquent behaviors like vandalism and fighting (Greenberg 1977; Billson 1996; Anderson 1999; Mullins, Wright, and Jacobs 2004). Mark Colvin (2000) adds coercion to the discussion by concentrating on how some juveniles feel pushed toward crime and delinquency due to the threat of physical or emotional harm. According to Agnew (2006: 9) this category of strain includes harsh, excessive, and inconsistent discipline by parents, humiliating treatment by teachers, physical and verbal abuse by

peers, and abusive and threatening treatment in the workplace. When juveniles feel failure in achieving these expanded goals through acceptable societal channels they may turn to crime and delinquency, including firearms carrying.

Agnew then attempts to address the expansion of potential negative relationships by defining three types of strain, each representing a different type of negative relationship. They are presented as ideal types and include when other individuals 1) prevent one from achieving positively-valued goals (e.g. classic strain thought of monetary success or middle class status – *lose something good*), 2) remove or threaten to remove positively valued stimuli that one possesses (e.g. the breakup of a romantic companion or the death of a parent – *receive something bad*), or 3) present or threaten to present one with noxious or negatively- valued stimuli (e.g. insults, physical assault, or overwork – *fail to get something they want*).

Agnew also considers the importance of not only identifying different types of strain but further defining the way various strains affect the individual. These include objective and subjective strains as well as experienced, vicarious, and anticipated strains. *Objective strains* are the focus of the majority of research in strain theory and involve events and conditions disliked by most people, such as physical assaults and prolonged poverty. *Subjective strains* are the events and conditions specifically disliked by particular individuals or groups (Landau 1997; Agnew 2001, 2006). For example, people react differently to such things as failing grades and/or not participating in certain school clubs and organizations.

The analysis of how individuals define their personal experiences to strain also includes vicarious and anticipated strains. *Vicarious strains* are those experienced by

people physically or emotionally close and considered important to the individual, like family and friends. This type of strain, even if the person experiencing it is someone other than the individual themselves, can be very distressing to the individual and press them toward crime or delinquency (Maxwell 2001; Eitle and Turner 2002; Agnew 2002, 2006).

Agnew (2006) gave several reasons vicarious strains can increase crime and delinquency including revenge against those victimized or prevention from continuing harm to loved ones. Similar to vicarious strains, *anticipated strains* may be upsetting to the individual and, as a reaction or prevention measure, compel them towards crime and delinquency. Anticipated strain can occur when the individual senses the existing strain in their lives will persist into the future or that brand new strains will come about. For example, juveniles residing in high-crime neighborhoods may “anticipate” that they or their family will be victims of violent hostility and feel the need to carry firearms for protection. They may also feel obligated to assume a tough or aggressive disposition to ward off potential disrespect or violence (Anderson 1999; Baron, Forde, and Kennedy 2001).

According to Agnew (1992: 51) three sub-types of strain must be considered under the first ideal-type of strain resulting from failing to achieve positively-valued goals. The first one is “*strain as the disjunction between aspirations and expectations/actual achievements.*” Its analysis covers many of the major theories looking at juvenile delinquency, including the previously discussed classic strain theories of Merton, Cohen, and Cloward and Ohlin. The second and third sub-types are primarily drawn from the justice/equity literature and will be discussed later (Thibaut and Kelley

1959; Ross, Thibaut, and Evenback 1971; Jasso and Rossi 1977; Berger et al. 1983; Hegtvedt 1990).

These classic strain theories characteristically measure juvenile strain in terms of the disjunction between aspirations and expectations. However, with the expanded nature of Agnew's General Strain Theory this approach has been widely criticized for its limitations (Clinard 1964; Hirschi 1969; Kornhuaser 1978; Liska 1987; Agnew 1995). Primary criticisms of these theories include: 1) are unable to explain the extensive nature of middle-class delinquency, 2) neglect goals other than monetary success/middle-class status, 3) neglect barriers to goal achievement other than social class, and 4) do not fully specify why only some strained individuals turn to delinquency (Agnew 1992).

The second sub-type is "*strain as the disjunction between expectations and actual achievements*" and it contends that the juvenile's expectations originate from the individual's past experiences or comparisons with generalized others who are analogous to the juvenile. The emotions generated by the juvenile from the failure to achieve these expectations are customary to strain and include anger, resentment, and dissatisfaction. These emotions often cause frustration which can inspire the individual to reduce the gap between expectations and actual achievements with delinquency. Agnew claims it is more likely the strain caused by the failure to achieve social "expectations" would create more anguish than the failure to achieve "aspirations."

The third sub-type is "*strain as the disjunction between just/fair outcomes and actual outcomes*." This concept claims that juveniles do not necessarily involve themselves in social interactions focused on a specific outcome. But they do go into interactions expecting a certain justice or fairness often referred to as an equitable

relationship. Agnew (1992: 53) states, “Individuals in a relationship will compare the ratio of their outcomes and inputs to the ratio(s) of specific others in that relationship” and “If the ratios are equal to one another, they feel that the outcomes are fair and just.” If the outcomes are defined as unequal by the juvenile, strain results and strong motivation for delinquency exists, especially if the juvenile feels less rewarded and treated worse than a comparable peer (Hegtvedt 1990). In this context, juveniles in an inequitable relationship may pursue delinquency with the intention of 1) increasing their outcomes (e.g. theft); 2) lowering their inputs (e.g. absence from school); 3) lowering the outcomes of others (e.g. assault, vandalism, theft); and/or 4) increasing the inputs of others (e.g. being persistently boisterous).

Agnew (1992) states that the psychological literature on stress and aggression proposes that analyzing the blocking of one from achieving positively-valued goals does not go far enough in explaining strain. The second (removing or threatening to remove positively valued stimuli) and third (present or threaten to present one with noxious or negatively-valued stimuli) ideal types provide additional insight. Research by Compas (1987) and Compas and Phares (1991) construct stressful life-events scales for adolescents which include such things as the loss of a boyfriend/girlfriend, the death or serious illness of a friend, the divorce/separation of one’s parents, moving to a new school district, suspension from school, and various adverse work conditions. When these types of previously held positively-valued stimuli are withheld or diminished increased aggression often results (Bandura, 1973, 1983; Van Houten, 1983).

Research by Bandura (1973) and Zillman (1979) reveals that the introduction of noxious stimuli to the juvenile has great potential to lead to increased aggression and

other delinquent outcomes, even when a legal evasion is available. “Noxious stimuli may lead to delinquency as the adolescent tries to 1) escape from or avoid the negative stimuli; 2) terminate or alleviate the negative stimuli; 3) seek revenge against the source of the negative stimuli or relaxed targets, and/or 4) manage the resultant negative affect of taking illicit drugs” (Agnew 1992: 58).

A good number of noxious stimuli have been explored in previous research, including several that could contribute to increased juvenile firearm carrying. Specifically, aggression and delinquency have been associated with such noxious stimuli as child abuse and neglect (Duxbury 1980; Fagan and Wexler 1987; Rivera and Widom 1990), criminal victimization (Lauritsen, Sampson, and Laub 1991), negative relationships with parents, negative relationships with peers, and negative school experiences (Hawkins and Lishner 1987).

These kinds of negative relationships make it more likely for the individual to experience the anger/frustration that creates pressure for some kind of corrective action to take place as a response to the offense or the offender. Consistent with other theorists in the anomie/strain tradition, Agnew (1992) contends that some individuals experiencing strain turn to crime or delinquency. Moreover, delinquent behavior may be a solution for easing strain (e.g. physically assaulting the offender or running away from home), for seeking revenge (e.g. school shootings), or coping with the anger/frustration the individual experiences (e.g. illicit drug use). Researchers Terrie Moffitt (1993) and Charles Tittle (1995) focus on juveniles’ attempts to achieve freedom or autonomy from authority figures, particularly from school authorities. Juveniles in this category may

deal with their strains by purposely breaking school rules, regular school truancy, theft, and vandalizing school property.

Steven F. Messner and Richard Rosenfeld (2001) have developed another version of strain theory called the Institutional-Anomie Theory. In their analysis, they illustrate how all of the previous researchers, who have drawn from the work of Robert Merton, have neglected one key component. In Merton's (1938) writing "Social Structure and Anomie" he attempts to answer two questions: 1) Why does the United States have such a high crime rate?, and 2) Why are some groups within the United States more likely to engage in criminal activity? Messner and Rosenfeld contend that existing theory largely ignored the first question. They would agree with Merton's analysis that the United State's high crime rate is at least partially due to the fact that we persuade everyone to pursue the goal of monetary success, but place limited emphasis on the socially defined legitimate means for achieving such success.

In response, their research aims to expand on Merton's theory by answering the first question. They reason that the cultural goal of monetary success is influenced by the reality that the economy dominates the major institutions of our society (i.e. the family, the school, government), and this domination obstructs the efficient operation of these other institutions. Messner and Rosenfeld refer to this unrestrained pursuit of monetary success as "The American Dream." The emphasis placed on the importance of non-economic roles, like parenting and teaching is diminished, and non-economic institutions, like schools, are pressured into accommodating themselves to the demands of the economy. Based on the individualized competition for rewards, Messner and Rosenfeld argue that, as a result, these other institutions cannot adequately prepare, socialize, or

train individuals to become productive and functioning members of society. In turn, this impedes society's ability to sanction criminal and delinquent behavior.

Non-Theory Specific Determinants of Carrying Firearms

Regardless of the extensive research on juvenile weapon carrying, there is not a tremendous amount of consensus among academics as to the impact of demographic variables. For example, most of the research proposed that minorities are more likely than whites to carry weapons (Kingery, Pruitt, and Heuberger 1996; Kann et al. 1996, 1998, 2000; Hill and Drolet, 1999; Simon, Crosby, and Dahlberg 1999; Forest, et al. 2000; Wilcox and Clayton 2001). However, DuRant et al. (1999) reported that, although minorities were more likely than whites to carry guns on school property, carrying weapons, such as knives and clubs, was not related to race/ethnicity. Several other studies found no significant relationship between race/ethnicity and weapon carrying (Callahan, Rivara, and Farrow 1993; Sheley and Brewer 1995; and Kulig, Valentine, Griffith, and Ruthazer 1998). Finally, some studies found that whites were more likely to own and carry guns than racial/ethnic minorities (Lizotte, Tesoriero, Thornberry, and Krohn 1994; Puzzanchera 2000).

Research regarding geographic location and juvenile firearms carrying is largely inconclusive. Much of the research on juvenile firearms carrying has been conducted in urban areas, leaving limited analysis to the non-metropolitan/rural regions. In those studies that have compared geographic residency, the research has produced conflicting findings regarding whether juveniles residing in metropolitan/urban areas are more likely to carry firearms than those living in non-metropolitan/rural areas. Research by Malek, Chang, and Davis (1998) conveyed that living in metropolitan areas can positively affect

juvenile firearm carrying. Hawkins, Campanaro, Pitts, and Steiner (2002) found that firearm carrying is similar between metropolitan/urban and non-metropolitan youth. A few studies have reported that non-metropolitan/rural juveniles are more likely to carry weapons than their metropolitan/urban counterparts (Kingery, Coggeshall, and Alford 1999; Simon, Crosby, and Dahlberg 1999). Certain studies reported that juveniles, attending schools located in cities, were more likely to report knowledge of guns being brought to school than juveniles in suburban and rural areas (Bastian and Taylor 1991; Chandler, Chapman, Rand and Taylor 1998). Other studies found that urban students were less likely than rural students to own and carry guns (Sheley and Wright 1998; Wilcox 2000; Atav and Spencer 2002).

Race and ethnicity play some role in firearms carrying but many of the findings are inconclusive. Certain studies have reported that whites are less likely to carry weapons than minority students (Kingery, Pruitt, and Heuberger 1996; Simon, Dent, and Sussman 1997). One study reported that white male students were more likely than black male students to carry weapons (McKeown, Jackson, and Valois 1998). While others have reported that there is no race-ethnicity effect on carrying weapons among juveniles (Sheley and Wright 1995; Bailey, Flewelling, and Rosenbaum 1997; DuRant, Kahn, Beckford, and Woods 1997).

Research looking at socioeconomic status (SES) has usually included either parent's education or family income as a measure for family SES. Simon, Crosby, and Dahlberg (1999) showed higher levels of parental education were negatively associated with school based weapon's carrying. More specifically, in regard to socioeconomic status (SES) and firearms carrying among juveniles, studies looking at high school

students and delinquents report that juveniles with low to moderate economic status have greater access to firearms than those with a higher socioeconomic status (Callahan and Rivara 1992; Callahan, Rivara, and Farrow 1993; Lizotte et al. 1994; Forrest, Zychowski, Stuhldreher, and Ryan 2000; Wilcox and Clayton 2001). Kulig, Valentine, Griffith, and Ruthazer (1998) found no significant relationship between SES and juvenile weapon carrying. Finally, Wilcox (2000) found that SES is a factor for urban juveniles but not among rural juveniles.

There are also inconsistencies in the research on the relationship between age and weapons carrying. Lizotte and Sheppard (2001) found that older juveniles are more likely than younger juveniles to carry firearms and that the reasons for carrying firearms vary with age. DuRant, et al. (1999) reported that older middle school students are more likely than those in earlier grades to carry weapons to school, and Simon, Dent, and Sussman (1997) found a similar correlation with age and weapon carrying among high school students. However, other studies showed that weapon carrying among high school students actually decreases with age (Kann et al. 1996, 1998; Kulig et al. 1998; Hill and Drolet 1999; Forrest, Zychowski, Stuhldreher, and Ryan 2000). Finally, Kingery, Coggeshall, and Alford (1999) and Wilcox (2000) found no significant correlation between age and weapon carrying.

Despite the lack of consensus among researchers with many of the other variables there are two that have been consistently linked with weapons-related juvenile behavior. The first is *gender*, with boys being significantly more likely than girls to own and carry firearms and other weapons (Callahan and Rivara 1992; Webster, Gainer, and Champion 1993; Lizotte, et al. 1994; Arria, Wood, and Anthony 1995; Sheley and Brewer 1995;

DuRant, et al. 1995; 1997; 1999; Vaughan et al. 1996; Bailey, Flewelling, and Rosenbaum 1997; Simon, et al. 1997, 1999; Hill and Drolet 1999; Puzzanhera 2000; Wilcox and Clayton 2001).

Juvenile involvement in crime, delinquency, and other risk behaviors is the second variable showing a consistent correlation with juvenile weapon carrying (Sheley and Brewer 1995). Studies have shown that juvenile weapon carrying is associated with *skipping school* (Bailey, Flewelling, and Rosenbaum 1997), *fighting* (DuRant, et al. 1995); *early sexual activity* (Kulig et al. 1998), and *alcohol and drug use* (Forrest, Wood, and Anthony 2000). These associations are consistent with much of the research that demonstrates juveniles involved in delinquent behavior generally do not specialize in their delinquency, but rather they are “generalists.”

Variables Regarding the Prevalence of Juveniles’ Access to Firearms

The most prominent literature plainly shows that juveniles face few impediments in attaining firearms. Research by Wright, Sheley, and Smith (1992) reported that 83% of incarcerated juveniles owned guns at the time of their incarceration and 22% of male high school students owned guns. A national survey of more than 700 male high school students reported that one half of the youths, “reported that obtaining a gun would be ‘little’ or ‘no’ trouble” (Sheley and Wright 1998: 4). Another study in Seattle, Washington looked at residents of a juvenile detention center and found that almost 60% of the adjudicated delinquents owned handguns (Callahan, Rivara, and Farrow 1993), and more than one third of high school students surveyed in Seattle reported having easy access to handguns (Callahan and Rivara 1992). A study of students in a suburb of New Orleans, Louisiana, suggests that 18% of juveniles own handguns (Sheley and Brewer

1995). Cunningham, Henggeler, Limber, Melton, and Nation (2000) surveyed more than 6,000 elementary and middle school students in a non-metropolitan area of a southeastern state and found that, among students in the fifth through seventh grades, 14.4% owned rifles and 9% owned handguns.

Consistent with the literature's reporting that juveniles have few problems obtaining firearms, further research shows that juveniles often carry guns and other weapons. Data collected and analyzed by Wright, Sheley, and Smith (1992) suggested that 84% of incarcerated juveniles carried guns, 55% of incarcerated juveniles had carried guns routinely, 23% of male high school students had carried guns, and 12% of male high school students had carried guns regularly. Sheley and Brewer (1995) reported that 17% of students surveyed in a New Orleans suburb had carried a handgun. Additionally, approximately one third (32.9%) of students attending alternative schools nationwide reported having carried firearms (Grunbaum, et al. 2000).

While most of the research denotes that juveniles are relatively safe while at school, many of studies on juvenile weapon carrying exhibit a widespread possibility of weapons-related school violence. Chandler, Chapman, Rand, and Taylor (1998) found a nationwide average of 5.3% of students reported seeing other students carry guns at school, and 12.7% of students knew other students who had brought guns to school. Four percent of high school students and nearly 50% of the incarcerated juveniles surveyed in Seattle, Washington, reported having carried firearms to school (Callahan and Rivara 1992; Callahan, Rivara, and Farrow 1993). Other national data indicated that between 10% and 20% of students have carried weapons to school (Everett and Price 1995; Simon, Crosby, and Dahlberg 1999; Forrest, Zychowski, Stuhldreher, and Ryan 2000).

The next chapter will begin with a discussion that compares and contrasts the three theories utilized in this research, including how they are different from each other, how they might overlap or intersect in their analysis, and why they are relevant to a study looking at the determinants of juvenile firearms carrying. Chapter Three will also set up the study by discussing the purpose of the research and the research questions, listing the hypotheses, explaining the data set, and formulating the research methods. The discourse on the research methods will explain how the dependent, independent, and control, variables were operationalized, and the design for how the data will be analyzed in order to test the research hypotheses.

STATEMENT OF HYPOTHESES AND DESCRIPTION OF RESEARCH METHODS

Present Study

The present study will do a theoretical comparison of variables drawn from the three different theoretical perspectives reviewed in Chapter Two and empirically examine how the variables from each theory influence juvenile firearms carrying. Each of the three theories has been used extensively in the study of general delinquency but little theoretical attention has been devoted to studying the determinants of juvenile firearms carrying as a specific form of delinquency. The three theoretical perspectives addressed in the current project include Anomie/Strain Theory, Differential Association/Social Learning Theory, and Social Control Theory.

Theoretical Contrast and Comparison

The theory of Anomie/Strain is developed primarily from the classic work of Durkheim ([1893], 1935), Tönnies (1957), and Merton (1938), and more recently in the work of Agnew (1984, 1992, 2001, 2002, 2006). Strain Theory postulates that social structures within society may encourage individuals to commit crime. Social structure refers to processes at the cultural level that are distributed downward and can affect how individuals perceive their needs. The tension or “strain” then experienced by individuals as they pursue socially mandated expectations can pressure them towards deviance. Drawing from the Chicago School of sociological thought, Cohen (1955) brought the general terms of Strain Theory into a context that explained the juvenile delinquency of lower class males in gangs.

Strain Theory came under attack in the 1970s and declined in popularity, largely due to the criticisms of Hirschi (1969) and Kornhauser (1978). However, in the 1990s, Agnew (1992) contended that the foundational thought established in Strain Theory could still be fundamental in explaining crime and deviance. The theory simply needed revision so that it wouldn't be exclusively attached to social class or social structural components. It is in this context that the theory provides the most potential as an explanation for juveniles firearms carrying.

Agnew developed a general strain theory that focused more on the individual's immediate social environment and much less on social class or structural explanations. Agnew argued that the major source of strain is a result of disrespectful negative relationships. He then attempts to address the extension of potential negative relationships by defining three types of strain. These include when other individuals 1) prevent one from achieving positively-valued goals, 2) remove or threaten to remove positively valued stimuli, or 3) present or threaten to present one with negatively valued stimuli (Agnew 1992, 2001, 2006). Delinquent behavior may then be a solution for easing strain, for seeking revenge, or coping with the anger/frustration the individual experiences.

These solutions can all contribute to the explanation of the determinants of firearms carrying among juveniles. For example, a juvenile might feel the need to carry a firearm if they have been threatened or physically assaulted either at home, school, or in their neighborhood to the point they want protection from perceived or actual violence. Or, alternately, a juvenile might get fed up to the point where he/she wants to get revenge against those threatening or assaulting them.

Strain Theory differentiates from Differential Association/Social Learning Theory and Social Control Theory with its emphasis on the type of social relationship (*negative relationships with others*) and the motivation for delinquency (*pressured into delinquency*). The significant difference between Social Control Theory and Strain Theory lies in the type of societal factors that lead to crime and delinquency, and why these factors lead to crime and delinquency. Social Control Theory focuses on the absence of significant relationships with conventional others and institutions (Agnew 2005; Cullen and Agnew 2006). It resists the concept that outside forces pressure the juvenile into delinquency. Instead, it claims that the absence of significant relationships with either individuals or groups “frees the adolescent to engage in delinquency.” In essence, delinquency is more likely to occur when weak bonds with conventional others (i.e. parents or teachers) and institutions (i.e. school or work) fall short in exercising direct control over the individual by consistent monitoring of behavior and/or sanctioning of rule violations.

Even though the strain and social control theories differ in their description of the causes of crime and delinquency, they also overlap in some ways. In fact, strains experienced by the individual may reduce the level of effective social controls (Agnew 2006). For example, harsh and inconsistent parental discipline may diminish the juveniles’ emotional bond to parents. And juveniles with low social control have a higher probability of responding to strains with crime or delinquency, because the penalty for these indiscretions seems lower to them. On the other hand, low social control may lead to increased strains. For example, parents or peers, who have little regard for an adolescent, are more likely to abuse them causing strain and alienation. Differential

Association/Social Learning Theory and Strain Theory both look at the effect of the social environment on crime. While Strain Theory concentrates on the effects of negative relationships with individuals or institutions, Differential Association/Social Learning Theory looks at the effects of positive relationships with deviant others.

Differential Association Theory was developed by Sutherland (1939) who claimed that individuals learn the values, attitudes, motives, and techniques for delinquent behavior through intimate interactions with others. Due to these social interactions it can become socially easier for individuals to commit crime or delinquency. Differential Association Theory concentrates largely on how people learn to become delinquents or criminals, but typically does not concern itself with why they become criminals. In my data analysis, I will attempt to draw comparisons between differential association and strain, as well as demonstrate the contrast or differences with these two theories and Social Control Theory.

Social Learning Theory is essentially an extension of Sutherland's Differential Association Theory which took on two core extensions. The first one primarily draws from psychological operant-conditioning based learning theories and was largely developed by Jeffery (1965). The other, which has received wide acceptance among criminologists interested in juvenile delinquency is Akers' (1973) Social Learning Theory. Akers asserts that intense early life associations that continue over a long period of time have the greatest influence over juvenile attitudes and behaviors. As a result, primary groups like family and peers have a very strong effect on delinquency among juveniles.

Strain Theory differentiates from the differential association/social learning and social control theories in its emphasis on the type of social relationship (*negative relationships with others*) and the motivation for delinquency (*pressured into delinquency*). The significant difference between Social Control Theory and Strain Theory is in their explanation of the sort of societal factors that lead to crime and delinquency, and why these factors lead to crime and delinquency. Social Control Theory focuses on the “absence of significant relationships with conventional others and institutions.” It resists the concept that outside forces pressure the juvenile into delinquency. Instead, it claims that the absence of significant relationships with either individuals or groups “frees the adolescent to engage in delinquency.” In essence, delinquency is more likely to occur when weak bonds with conventional others (i.e. parents or teachers) and institutions (i.e. school or work) fall short in exercising direct control over the individual by consistent monitoring of behavior and/or sanctioning of rule violations.

Differential Association/Social Learning Theory differs from strain and social control theories by its emphasis on “positive relationships with deviant others” (Agnew 1992: 49). In Differential Association/Social Learning Theory the juvenile becomes involved in delinquency because the groups with which they predominantly associate convince the adolescent to “view delinquency as a desirable or at least justifiable form of behavior” (Agnew 1992; 2006). The paradigm of Differential Association/Social Learning Theory demonstrates that friends and/or family educate the individual on values and beliefs favorable to crime by showing them ways to participate in crime and delinquency and by creating an environment supportive of such behavior (Akers 1998;

Agnew 2005; Cullen and Agnew 2006). So, Differential Association/Social Learning Theory and Strain Theory focus on separate characteristics of the social environment and give differing explanations about why the social environment influences the individual to engage in crime and delinquency. However, the strain and differential association/social learning theories also overlap in some significant ways. For example, a juvenile experiencing strain may be compelled to bond with deviant groups or individuals who model and support deviant behaviors.

While Strain Theory and Differential Association/Social Learning Theory look closely at social structure and how it influences the individual to engage in delinquency, Social Control Theory depends heavily on social factors to explain the reasons people are restrained from delinquent behavior. Social Control Theory suggests that the individual's social relationships, values, and commitments to conventional society determine their obedience to the law. If these attachments are strong the individual will then voluntarily restrict their involvement in deviant behavior.

Durkheim's work has already been mentioned to have contributed greatly to the development of Anomie/Strain, but he also has been called by some as the "father of Social Control Theory" (Williams and McShane 1999: 190). Durkheim ([1895], 1965) claims that crime and delinquency are functional for society in that they clarify societal moral codes or "boundaries" developed by the social reaction of others to particular behaviors. In addition, many of the early versions of Social Control Theory were developed as alternatives to strain theories including the work of Reiss (1951), Reckless (1955, 1961), Sykes and Matza (1957), Nye (1958), and Hirschi (1969).

Hirschi's Social Control Theory was chosen as one of the theories for this theoretical comparison because in the research on juvenile delinquency it is the most often cited and empirically tested theory. Hirschi's element of attachment measures the strength of an individual's ties to others who conform to society's conventional standards. Research findings have been mixed in regard to the effect of parental relationships on juvenile firearms carrying. Some studies suggest close parental involvement was significant in reducing firearms carrying (Bailey, Flewelling, and Rosenbaum 1997). Research by Kingery, Coggeshall, and Alford (1999) reported a positive parent-child relationship was unrelated to firearms carrying. Other studies show close relationships to parents might actually contribute to firearms carrying (Orpinas, Murray, and Kelder 1999). The latter findings may be better explained by Differential Association Theory which would look at what those closely related parents were demonstrating to their children. Consistent with Hirschi's predictions regarding the importance of the element of attachment and involvement, research consistently demonstrates that strong connections to education and involvement in school environments significantly reduces juvenile firearms carrying (Kingery, Coggeshall, and Alford 1998; Mulvey and Cauffman 2001).

Purpose of the Study

The purpose of this study is to determine the explanatory power of the theoretical perspectives of Differential Association/Social Learning, Social Control and Anomie/Strain as they apply to the explanation of juvenile firearms carrying. While a substantial number of studies have investigated the determinants of juvenile firearms

carrying, previous research is limited in its focus on comparing theoretical perspectives that provide the best understanding of this issue. Moreover, none of the previous studies has attempted an integration of these theories to provide a more comprehensive explanation of juvenile firearms carrying.

Research Questions

With the purpose of the study in mind, the main questions guiding this research are as follows: a) Which of the three theories has the most explanatory power regarding the determinants of juvenile firearms carrying? b) Which of the variables central to these three theories are important in explaining juvenile firearms carrying? And finally, c) What are the implications of this study for an integration of the three theoretical perspectives?

Hypotheses

Each of the three theories examined allows several hypotheses to be deduced when applied to the problem of explaining juvenile firearms carrying. The first four hypotheses are developed from Differential Association/Social Learning Theory:

H1: More extensive association with peers involved in gun-related delinquency will be positively related to juvenile firearms carrying.

H2: More extensive association with friends in gun-related delinquency will be positively related to juvenile firearms carrying.

H3: Having other male family members carrying firearms will be positively related to juvenile firearms carrying.

H4: Gang membership will be positively related to juvenile firearms carrying.

Hypotheses five through ten are derived from Social Control Theory:

H5: A higher level of parental attachment will be negatively related to juvenile firearms carrying.

H6: A higher level of teacher attachment will be negatively related to juvenile firearms carrying.

H7: A higher level of parental supervision will be negatively related to juvenile firearms carrying.

H8: A higher level of commitment to conventional education will be negatively related to juvenile firearms carrying.

H9: More extensive school club participation will be negatively related to juvenile firearms carrying.

H10: More frequent attendance at religious services will be negatively related to juvenile firearms carrying.

Hypotheses eleven through fourteen are derived from Strain Theory:

H11: A higher level of experienced strain will be positively related to juvenile firearms carrying.

H12: A higher level of vicarious strain will be positively related to juvenile firearms carrying.

H13: A higher level of anticipated strain will be positively related to juvenile firearms carrying.

H14: A higher level of neighborhood strain will be positively related to juvenile firearms carrying.

Data and Research Methods

Data containing most of the desired measures for this study were collected in the *National Survey of Weapons-Related Experiences, Behaviors, and Concerns of High School Youth in the United States*, 1996. These data are made available through the Inter-University Consortium for Political and Social Research located at the University of Michigan. This national-level survey of youth was conducted by Joseph F. Sheley and James D. Wright to assemble detailed behavioral and attitudinal data concerning the use of weapons and violence. In this research project, Sheley and Wright endeavored to collect information from a broad sample of high-school aged youth with diverse histories and cultural backgrounds, from a range of community sizes, economic situations, and class, race, and ethnic backgrounds. The survey focused specifically on juvenile males and included a lengthy questionnaire measuring exposure to weapons (primarily firearms and knives) and violence, among other factors. The survey was completed by a sample of 733 10th and 11th grade male students. Information was collected on all weapon-related incidents experienced by a juvenile up to twelve months prior to the survey. In addition, information was collected on a wide range of characteristics and behaviors related to a juvenile's family, peers, school life and social life. Given that the survey was limited to juvenile males, sex/gender was held constant as part of the research design. This is appropriate given that prior research has consistently found that males are more likely to carry firearms compared to female juveniles (Callahan and Rivara 1992; Webster, Gainer, and Champion 1993; Lizotte, et al 1994; Arria, Wood, and Anthony 1995; Sheley and Brewer 1995; DuRant, et al 1995, 1997, 1999; Vaughan, et al 1996; Bailey, Flewelling, and Rosenbaum 1997; Simon, et al 1997, 1999; Hill and Drolet 1999; Puzanchera 2000; Wilcox and Clayton 2001).

Measurement of Dependent Variable

This study is interested in assessing the determinants of juvenile firearms carrying. The dependent variable, gun carrying, is measured by asking, “Within the past 12 months, about how often would you say you’ve carried a gun with you when you were outside your home?” The original survey question was coded: never (0), occasionally (1), most of the time (2), or all of the time (3). These data were recoded into a dichotomous variable appropriate for binary logistic regression as no=0 (respondent had not carried a gun outside the home within the last 12 months) and yes=1 (respondent had carried a gun outside the home within the last 12 months).

Measurement of Independent Variables

The independent variables were selected to reflect the three theoretical perspectives and are guided by the literature review. The independent variables are organized into four categories: (a) *Differential Association/Social Learning Theory* (peer influences, friend influences, gang membership, influence of family males carrying firearms outside the home, and definitions favorable to firearm carrying); (b) *Social Control Theory* (attachment [parent-juvenile relationship, teacher-juvenile relationship, and parental supervision], commitment [school grades, lack of school absence, not expelled from school, desire to finish high school, and plans to go to college], and involvement [school club membership and church attendance]); (c) *Strain Theory* (experienced strain, neighborhood strain, vicarious strain, and anticipated strain) [see Figure 3.1]; and (d) *control variables* (age, race, and living arrangements).

Several of the measures involved combining two or more indicators into a composite scale. In instances when scales were created to measure theoretical concepts,

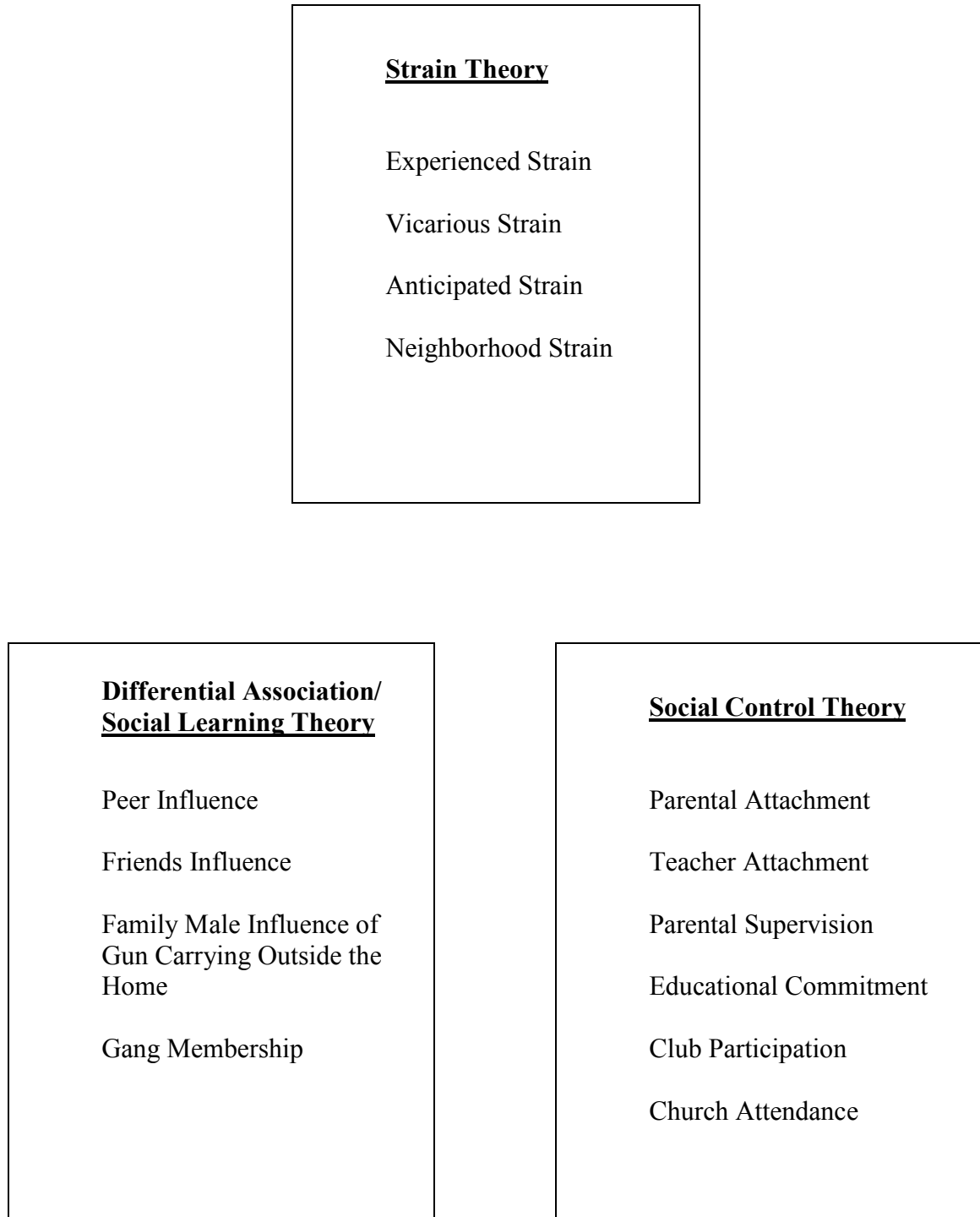
the internal consistency (reliability) of each scale was evaluated with Cronbach's alpha. The value of alpha can be interpreted as an overall average of the correlation between each of the items in the variable, adjusted for the total number of items. Alpha can range from 0 to 1, with higher values indicating greater internal consistency in measuring the underlying theoretical construct.

Theoretical Variables

Differential Association/Social Learning Theory

Peer Influence. Differential Association/Social Learning Theory suggests that peers have the strongest effects on juvenile delinquent attitudes and behaviors. Previous research also found that weapon carrying among peers increases the likelihood that juveniles will carry weapons themselves. Prior research has shown that juveniles who carry firearms tend to associate with peers who engage in other delinquent behaviors (Bailey, Flewelling, and Rosenbaum 1997; Malek, Chang, and Davis 1998; Kingery, Coggeshall, and Alford 1999; Lizotte and Sheppard 2001). In this study, peer influences were measured by asking the respondents to think about the kids with whom they spent a lot of time with when answering the following questions: (a) In the past 12 months, have you personally seen other kids carrying guns in your neighborhood?; (b) Have you seen other kids carrying knives as weapons in you neighborhood?; (c) Have you personally seen other students with guns on school grounds?; and (d) Have you personally seen other students with knives carried as weapons on school grounds?

Figure 3.1 Variables for Analyses Drawn from the Three Theories



Binary variables were created from each of these questions and summed to form a composite scale with a Cronbach's alpha of .738. The peer influence scale had a potential range of 0 to 4 and was used to measure the social learning concepts of imitation and differential association (Akers 2000).

Friends Influence. The influence of friends was measured by asking the respondents to think about the friends they spent a lot of time with when answering these questions: (a) About how many of these kids would you say own a gun?; (b) How many of them make a habit of carrying a gun outside the home but not for hunting or sport shooting?; (c) Have any of the friends you spend a lot of time with ever served time in a prison, reformatory, or jail?; (d) Have any of the friends you spend a lot of time with ever shot anyone?; and (e) Have any of the friends you spend a lot of time with ever been shot? Binary variables were created from these questions and summed to form a scale with a Cronbach's alpha of .654. The scale of friends influence had a potential range of 0 to 5 and was used to measure the social learning concepts of imitation and differential association (Akers 2000).

Male Family Members and Gun Carrying Outside the Home. Socialization by male family members is predicted to have a strong influence on gun-carrying behaviors. The influence of male family members carrying firearms is measured by asking, "How many carry a gun outside the home, but not for hunting or sport shooting?" and is coded into a binary variable where a value of 1 is assigned if male family members had carried a firearm outside the home. Otherwise a zero was assigned.

Gang Membership. Some research has revealed that adolescent participation in gang life increases the likelihood of juvenile firearms carrying. Gang membership was

measured by asking respondents, “Do you consider yourself a member of a gang?” This was coded into a binary variable with “yes” assigned a 1 and “no” assigned a 0.

Social Control Theory

Hirschi’s Social Control Theory argues that the stronger a youth’s bond to society, such as attachment to significant others or commitment to conforming activities such as school, the less likely they are to engage in delinquency. In this research project, the social bond is operationalized by parental attachment and supervision, teacher attachment, educational commitment, school club participation and church attendance.

Parental Attachment. The juvenile’s relationship with parents or guardians is measured by asking the question, “How would you rate your relationship with your parents or the adults you live with?” The survey response was originally coded: awful (0), not very good (1), somewhat good (2), very good (3), or great (4). Three different binary variables were then operationalized to measure low, moderate or high attachments to parents or guardians. For the variable measuring low parental attachment, a value of 1 was assigned if the respondent answered “awful” or “not good.” All other responses were assigned a value of zero. For the variable measuring moderate parental attachment, a value of 1 was assigned if the respondent answered “somewhat good.” All other responses were assigned a value of zero. For the variable measuring high parental attachment, a value of 1 was assigned if the respondent answered “very good” or “great.” All other responses were assigned a value of zero. Those with low parental attachment were treated as the reference group.

Teacher Attachment. The juvenile’s relationship with teachers at their school is measured by asking the question, “How would you rate your relationship with most of

your teachers?” The survey response was originally coded: awful (0), not very good (1), somewhat good (2), very good (3), or great (4). Three different binary variables were then operationalized to measure low, moderate or high attachments to teachers. For the variable measuring low teacher attachment, a value of 1 was assigned if the respondent answered “awful” or “not good.” All other responses were assigned a value of zero. For the variable measuring moderate teacher attachment, a value of 1 was assigned if the respondent answered “somewhat good.” All other responses were assigned a value of zero. For the variable measuring high teacher attachment, a value of 1 was assigned if the respondent answered “very good” or “great.” All other responses were assigned a value of zero. Those with low teacher attachment were treated as the reference group.

Parental Supervision. The extent to which parents or caregivers monitor juveniles’ evening social activities and whereabouts is another form of social control included in studies of social control (e.g. Benda 1995; Benda and Corwyn 2001). The efficiency of parental supervision is measured by asking the question, “If you are out past 10 p.m., do your parents or the adult who is responsible for you know where you are?” The survey response was originally coded: almost never (1), occasionally (2), fairly often (3), and almost always (4). Three different binary variables were then operationalized to measure low, moderate or high supervision by parents. For the variable measuring low parental supervision, a value of 1 was assigned if the respondent answered “almost never.” All other responses were assigned a value of zero. For the variable measuring moderate parental supervision, a value of 1 was assigned if the respondent answered “occasionally.” All other responses were assigned a value of zero. For the variable measuring high parental supervision, a value of 1 was assigned if the respondent

answered “fairly often” or “almost always.” All other responses were assigned a value of zero. Those with low parental supervision were treated as the reference group.

Educational Commitment. Hirschi (1969) utilized educational aspirations as another measure of commitment in Social Control Theory. Other studies have employed similar educational measures to operationalize commitment (e.g. Benda 1995; 1997). Social Control Theory suggests the greater commitment to social convention the less likely a juvenile is to participate in delinquent behavior. To measure the respondents’ commitment to the social convention of success in education the following questions were asked: (a) What grades do you usually get in school? Hirschi (1969) contends that grades in school are an exceptional way to measure commitment. As a source of social control.; (b) During the past year in school, about how often were you absent from classes?; (c) Have you ever been suspended or expelled from school?; (d) Do you think you will finish high school?; and (e) Do you plan on going to college after high school? Binary variables were created from each of these questions and summed into a scale with a Cronbach’s alpha of .411. The scale had a potential range of 1 to 5.

Club Participation. Involvement in conventional activities such as a job, sports, or other extra-curricular activities is another aspect of social control. A measure assessing the respondents’ involvement in school activities was developed from a question asking, “Do you participate in athletics, band, drama, or any other school organizations or clubs?” The survey response was originally coded: none (0), a few (1), and many (2). Three different binary variables were then operationalized to measure no, moderate or high participation in school clubs or extracurricular activities. For the variable measuring no participation in school clubs, a value of 1 was assigned if the

respondent answered “none.” All other responses were assigned a value of zero. For the variable measuring moderate participation in school clubs, a value of 1 was assigned if the respondent answered “a few.” All other responses were assigned a value of zero. For the variable measuring high participation in school clubs, a value of 1 was assigned if the respondent answered “many.” All other responses were assigned a value of zero. Those with no club participation were treated as the reference group.

Church Attendance. Attending religious services is an item that has been used in copious studies observing the relationship between religiosity and juvenile delinquency (e.g., Burkett 1993; Benda 1995; 1997; Johnson, Larson, De Li, and Jang 2000; Benda and Corwyn 2001). Participation in religious activities is also used to assess the involvement component of Social Control Theory. This measure is derived from the question: “About how often do you attend the services of a church or religious organization?” The survey response was originally coded: never (0), less than once a year (1), once a year (2), several times a year (3), once a month (4), or every week (5). Four different binary variables were then operationalized to measure no, low, moderate or high attendance at religious services. For the variable measuring no attendance at religious services, a value of 1 was assigned if the respondent answered “never.” All other responses were assigned a value of zero. For the variable measuring low church attendance, a value of 1 was assigned if the respondent answered “less than once a year” or “once a year.” All other responses were assigned a value of zero. For the variable measuring moderate church attendance, a value of 1 was assigned if the respondent answered “several times a year” or “once a month.” All other responses were assigned a value of zero. For the variable measuring high church attendance, a value of 1 was

assigned if the respondent answered “every week.” All other responses were assigned a value of zero. Those with no church attendance were treated as the reference group.

Strain Theory

Four scales consistent with Robert Agnew’s strain theory were developed: experienced strain, neighborhood strain, vicarious strain, and anticipated strain.

Experienced Strain. Strain personally experienced by the juveniles is estimated by examining the adolescents’ response to 12 questions regarding the past 12 months: (a) Has anyone in the home you live in received welfare, AFDC, food stamps or other forms of government assistance?; (b) Have you been threatened with a gun on school property?; (c) Have you actually been shot at on school property?; (d) Have you been threatened with a knife or other sharp object on school property?; (e) Have you actually been stabbed with a knife or other sharp object on school property?; (f) Have you been beaten or hit with a bat, board, or other such weapon on school property?; (g) Have you been threatened with a gun but not shot at off of school property?; (h) Have you been shot at, but not wounded off of school property?; (i) Have you actually been shot off of school property?; (j) Have you been threatened with knife off of school property?; (k) Have you actually been stabbed with a knife or other sharp object off of school property?; and (l) Have you been beaten or hit with a bat, board or other such weapon off of school property?” Binary variables were created from each of these questions and summed into a scale with a Cronbach’s alpha of .804. This scale had a potential range of 0 to 12.

Vicarious Strain. Strain experienced by other individuals around the juvenile, especially family members and friends, is identified as vicarious strain. Examples would include a family member or friend being assaulted, shot, or stabbed. Agnew (2002;

2006) claims that vicarious strain could lead to increased criminal coping such as carrying a firearm by seeking revenge or stopping the perpetrators from further harming those close to the juvenile. In this study, vicarious strain is measured by the juveniles' response to six questions that may have occurred in the past 12 months: (a) Have you seen someone being seriously wounded or killed by a gun, knife or other weapon in real life?; (b) Have any members of your immediate family been attacked by someone with a gun?; (c) Have any members of your immediate family ever been convicted of a felony?; (d) Have any of your friends been attacked by someone with a gun?; (e) Has anyone been shot or stabbed in your neighborhood?; (f) Has anyone been shot or stabbed on school grounds?" Binary variables were created from each of these questions and summed into a scale with a Cronbach's alpha of .581. The scale had a potential range of 0 to 6.

Anticipated Strain. Anticipated strains have been characterized as a person's fear or expectation that the strains currently being experienced will continue in the future or a feeling of certainty that new strains will regularly occur. For example, a juvenile may believe he will never escape the dangers of the community he grew up in because several generations of his family have lived and struggled in the same community. Similar to vicarious strains, anticipated strains could increase criminal coping. Juveniles may carry firearms to keep these anticipated strains from happening, or to intimidate those who could impose such strains (Agnew 2002, 2006). Juveniles were asked if the following could happen to them by the age of 25 to measure anticipated strain: (a) I will have been shot with a gun; (b) I will have been stabbed with a knife; and (c) I will no longer be alive. In addition these two questions were asked: (a) Are you personally ever afraid of violence in your neighborhood?; and (b) Are you personally ever afraid of violence in

school?” Binary variables were created from each of these questions and summed into a scale with a Cronbach’s alpha of .715. The scale had a potential range of 0 to 5.

Neighborhood Strain. Strain resulting from neighborhood problems is measured by juveniles’ responses when asked how many of the following neighborhood problems were a problem for the neighborhood they were living in: (a) drug addicts; (b) drug sellers; (c) gunfire; (d) graffiti; (e) burglaries; (f) muggings; (g) abandoned houses; (h) abandoned cars; and (g) winos or drunks. Binary variables were created from each of these questions and summed into a scale with a Cronbach’s alpha of .800. The scale had a potential range of 0 to 9.

Control Variables

A number of control variables were included to control for relevant variables not addressed by the three theories. These measures included age, whether a juvenile lived with both his parents, and race.

Age. The variable provides information regarding the age of the juvenile, where they are asked, “How old are you?” Responses ranged from ages 15-21. Respondents with ages 20 or 21 are excluded, as the target of the study is teenagers between the ages of 15-19.

Living with Parents. The variable was developed from questions of the data set regarding family living arrangements where the question was asked, “What adults are you living with now?” The responses included mother, father, step-father, step-mother, adult brother or sister, grandparents(s), other adult relative, foster parents, group home, and other. Relationship with parents is often a key component in previous research so a binary variable was created to assess whether the juvenile lived with both biological

parents: 0 = living with one or neither biological parents or 1 = living with both biological parents.

Race. Survey respondent was asked, “Which of the following best describes the racial or ethnic group you belong to?” The responses included White, Black, Hispanic¹, Asian, American Indian, and other. The race variable was re-coded to create four binary variables: “white,” “black,” “hispanic,” and “other race” (Asian, American Indian, and any other race/ethnicity). Those who were white were treated as the reference group.

Method of Data Analysis

Multivariate logistic regression analysis was used to test the research hypotheses. Logistic regression offers a feasible alternative to ordinary least squares (OLS) regression analysis when the dependent variable is a dichotomous measure (Agresti and Finlay 1997; Long 1997; Warner 2008). The dichotomous dependent variable for my study is “whether or not a juvenile has carried a gun outside the home within the past twelve months.” This variable will be regressed on a set of independent variables measuring relevant concepts drawn from the three theoretical perspectives previously discussed, and the set of control variables.

A block model approach was employed in the analysis. Separate logistic regression analyses were first run for each block of variables measuring concepts from each of the three theories. This was done to assess the explanatory power of each theory separately. The first model examined the statistical relationship between juvenile

¹ Persons of Hispanic origin were identified by a question that asked for self-identification of the person’s racial or ethnic group. It should be noted that the classification of Hispanic is an ethnic group and people of Hispanic origin may be of any race.

firearms carrying and variables drawn from Differential Association/Social Learning Theory, including the measurements for delinquent peers, delinquent friends, male family members carrying firearms outside the home, and gang membership. The second model examined the relationship between juvenile firearms carrying and variables drawn from Social Control Theory, including the measurements of parental attachment, teacher attachment, parental supervision, commitment to conventional education, club participation and church attendance. The third model examined the relationship between juvenile firearms carrying and the variables drawn from Strain Theory, including the measures of experienced strain, vicarious strain, anticipated strain, and neighborhood strain.

The fourth model examined the relationship between juvenile firearms carrying and the control variables age, the juveniles' living arrangements and race. The fifth model examined the relationship between juvenile firearms carrying and the three blocks of variables drawn from differential association/social learning, social control, and strain theories. Finally, the sixth model, contained the three blocks of variables drawn from the three theories and the control variables. As such, it represents the "full" model.

CHAPTER 3 - EMPIRICAL FINDINGS

Descriptive Statistical Analysis

The descriptive statistics for these variables are depicted in Table 4.1. The descriptive analysis for each variable includes the mean, standard deviation, minimum value, maximum value, and valid *N*. An examination of Table 4.1 indicates that the typical juvenile in the sample is white (.70), almost 17 years of age (16.86), and lives with both biological parents (.62). Six percent of the juveniles in this sample carried a gun outside the home within the 12 months prior to data collection.

In addition, most of the respondents had high parental attachment (.83), high parental supervision (.84), and high teacher attachment (.72). The respondents also had a high commitment to conventional education (4.19 mean on a scale ranging from 1 to 5) and moderate participation in school clubs (.47). Sixty-two percent had either moderate (.27) or high (.35) church attendance. The measurements of strain revealed that anticipated strain (1.08 mean on a scale ranging from 0 to 5) and neighborhood strain (1.72 mean on a scale ranging from 0 to 9) had the highest average levels among male juveniles in the sample.

Table 4.1 Descriptive Statistics

Variable	Mean or Proportion	SD	Min	Max	N
<i>Dependent Variable</i>					
Carry Gun	0.06	0.23	0	1	731
<i>Independent Variables (Differential Association/Social Learning Theory)</i>					
Delinquent Peers	1.64	1.43	0	4	718
Delinquent Friends	1.05	1.23	0	5	697
Men Carry Guns	0.20	0.40	0	1	707
Member of Gang	0.08	0.28	0	1	726
<i>Independent Variables (Social Control Theory)</i>					
Parental Attachment					
- Low Attachment	0.02	0.13	0	1	730
- Moderate Attachment	0.15	0.36	0	1	730
- High Attachment	0.83	0.38	0	1	730
Teacher Attachment					
- Low Attachment	0.05	0.23	0	1	731
- Moderate Attachment	0.23	0.42	0	1	731
- High Attachment	0.72	0.45	0	1	731
Parental Supervision					
- Low Supervision	0.04	0.20	0	1	717
- Moderate Supervision	0.12	0.33	0	1	717
- High Supervision	0.84	0.37	0	1	717
Educational Commitment	4.19	0.94	1	5	726

Table 4.1 – Continued

Variable	Mean or Proportion	SD	Min	Max	<i>N</i>
<i>Club Participation</i>					
- No Participation	0.23	0.42	0	1	730
- Moderate Participation	0.47	0.50	0	1	730
- High Participation	0.30	0.46	0	1	730
<i>Church Attendance</i>					
- No Attendance	0.17	0.38	0	1	731
- Low Attendance	0.21	0.41	0	1	731
- Moderate Attendance	0.27	0.44	0	1	731
- High Attendance	0.35	0.48	0	1	731
<i>Independent Variables (Strain Theory)</i>					
Experienced Strain	0.68	1.54	0	12	719
Vicarious Strain	0.77	1.11	0	5	713
Anticipated Strain	1.08	1.35	0	5	725
Neighborhood Strain	1.72	2.13	0	9	690
<i>Control Variables</i>					
Age	16.86	0.78	15	19	723
Living with Parents	0.62	0.49	0	1	732
White	0.70	0.46	0	1	729
Black	0.07	0.26	0	1	729
Hispanic	0.16	0.37	0	1	729
Other Races	0.07	0.26	0	1	729

Bivariate Correlational Analysis

The bivariate correlation matrix Pearson's r for the sample is presented in Table 4.2. The bivariate correlations revealed that all four measures drawn from Differential Association/Social Learning Theory have a significant, positive relationship with juvenile firearms carrying at the .01 level of significance. Associating with delinquent friends ($r = .382$) and gang membership ($r = .344$) had the strongest associations. Two of the measures drawn from Social Control Theory have a significant, negative relationship with juvenile firearms carrying at the .01 level of significance. The strongest associations were with a juveniles' commitment to education ($r = -.204$) and having high parental supervision ($r = -.172$). All four measures drawn from Strain Theory had a significant, positive relationship with juvenile firearms carrying at the .01 level of significance. The strongest relationships were with vicarious strain ($r = .358$) and experienced strain ($r = .325$).

Bivariate analysis for the independent variables revealed that outside the high correlations of the binary variables that are built in, correlations among the independent variables are moderate to weak in magnitude. A few of the higher correlations among the independent variables include a significant, negative relationship at the .01 level of significance between high teacher attachment and delinquent peers ($r = -.270$), and high teacher attachment and delinquent friends ($r = -.208$). High parental supervision has a significant, negative relationship with gang membership ($r = -.226$) at the .01 level of significance. High parental supervision has a significant, positive relationship with high parental attachment ($r = .237$) at the .01 level of significance.

Living with both biological parents has a significant, negative relationship with delinquent peers ($r = -.172$) at the .01 level of significance. Living with both biological

parents also has a significant, negative relationship with experienced strain ($r = -.140$) and vicarious strain ($r = -.136$) at the .01 level of significance.

Commitment to education had a significant, positive relationship with living with both biological parents ($r = .203$), and a significant, negative relationship with delinquent peers ($r = -.302$), delinquent friends ($r = -.237$), and low teacher attachment ($r = -.216$), all at the .01 level of significance. Commitment to education also had a significant, negative relationship with experienced strain ($r = -.238$) and vicarious strain ($r = -.258$).

All four measurements for strain theory have a significant, positive relationship with gang membership at the .01 level of significance. Experienced strain ($r = .386$) and vicarious strain ($r = .247$) have the highest correlations among the strain variables.

Bivariate analysis for the control variables disclosed few significant relationships and those relationships were also weak in magnitude. There is a significant, negative correlation with gun carrying with those living with both biological parents ($r = -.073$) and a significant, positive relationship with juveniles being Hispanic ($r = .082$), but only at the .05 level of significance.

An interesting finding from the bivariate correlation matrix is that all four measurements for strain theory have a significant, positive relationship with both delinquent peers and delinquent friends. Experienced strain has a significant, positive relationship at the .01 level of significance with delinquent peers ($r = .404$) and delinquent friends ($r = .464$). Vicarious strain has a significant, positive relationship at the .01 level with delinquent peers ($r = .497$) and delinquent friends ($r = .531$). Anticipated strain has a significant, positive relationship at the .01 level of significance with delinquent peers ($r = .410$) and delinquent friends ($r = .362$). Finally, neighborhood

strain has a significant, positive relationship at the .01 level of significance with delinquent peers ($r = .367$) and delinquent friends ($r = .300$).

These correlations, combined with those for juvenile firearms carrying, suggest that a subset of juveniles in the sample participate in a delinquent subculture in which they associate with delinquent friends and peers, and tend to experience strain in the forms that were measured. The correlations with gang membership suggest that the formation of gangs may also be part of this subculture. Moreover, gun carrying may become an element of the subculture as well; and, there is a slight tendency for this to be reinforced by other males in the juvenile's household carrying guns as well.

Table 4.2 Bivariate Correlations Among Study Variables

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) Carry Gun	1.00										
(2) Delinquent Peers	.294**	1.00									
(3) Delinquent Friends	.382**	.488**	1.00								
(4) Men Carry Guns	.171**	.300**	.348**	1.00							
(5) Member of Gang	.344**	.296**	.365**	.141**	1.00						
Parental Attachment											
(6) - Low	.060	-.005	.116**	.091*	.036	1.00					
(7) - Moderate	.017	.144**	.106**	.041	.155**	-.058	1.00				
(8) - High	-.037	-.136**	-.143**	-.071	-.161**	-.295**	-.937**	1.00			
Teacher Attachment											
(9) - Low	.180*	.198**	.182**	.051	.237**	.104**	.213**	-.240**	1.00		
(10) - Moderate	.042	.182**	.123**	.165**	.020	.001	.122**	-.117**	-.131**	1.00	
(11) - High	-.130**	-.270**	-.208**	-.179**	-.139**	-.054	-.221**	.231**	-.383**	-.866**	1.00
Parental Supervision											
(12) - Low	.187**	.134**	.139**	.057	.158**	.022	.097**	-.101**	.217**	.014	-.123**
(13) - Moderate	.078*	.161**	.133**	.061	.157**	.015	.210**	-.206**	.022	.083*	-.089*
(14) - High	-.172**	-.216**	-.191**	-.085*	-.226**	-.025	-.238**	.237**	-.139**	-.081*	.146**
(15) Educ. Commitment	-.204**	-.302**	-.237**	-.119**	-.205**	-.095**	-.022	.054	-.216**	-.026	.134**
Club Participation											
(16) - None	.045	.118**	.120**	.079*	.127**	-.019	.078*	-.069	.157**	.075*	-.150**
(17) - Moderate	-.006	-.041	-.059	-.030	-.010	-.015	-.048	.056	-.028	.050	-.029
(18) - High	-.035	-.064	-.045	-.039	-.106**	.034	-.061	.047	-.091*	-.130**	.168**
Church Attendance											
(19) - None	-.002	.033	.001	-.024	.043	-.063	-.041	.062	.030	.058	-.070
(20) - Low	-.007	.084*	.049	.002	.069	.033	.125**	-.131**	.112**	.011	-.067
(21) - Moderate	.032	.032	.052	.046	.000	.060	.000	-.021	-.022	-.036	.045
(22) - High	-.022	-.128**	-.091*	-.025	-.093*	-.033	-.074*	.082*	-.100**	-.022	.071
(23) Experienced Strain	.325**	.404**	.464**	.230**	.386**	.137**	.122**	-.165**	.145**	.048	-.119**
(24) Vicarious Strain	.358**	.497**	.531**	.192**	.247**	.047	.156**	-.166**	.127**	.087*	-.146**
(25) Anticipated Strain	.169**	.410**	.362**	.211**	.187**	.024	.186**	-.186**	.150**	.215**	-.275**
(26) Neighborhood Strain	.230**	.367**	.300**	.161**	.221**	.023	.141**	-.144**	.109**	.132**	-.179**
(27) Age	-.049	-.051	-.048	-.033	-.021	-.003	-.037	.037	-.036	.000	.019
(28) Living with Parents	-.073*	-.172**	-.086*	-.058	-.116**	-.045	-.122**	.132**	-.061	-.014	.044
(29) Black	.009	.013	.082*	.125**	.093*	-.037	.001	.012	.005	.018	-.019
(30) Hispanic	.082*	.106*	.087*	-.020	-.007	-.031	.049	-.037	.058	-.032	.000
(31) Other Races	.031	.050	-.005	-.008	-.006	.125**	.060	-.102**	.003	.053	-.051

** . Correlation is significant at the 0.01 level (2-tailed). ** $p < .01$

* . Correlation is significant at the 0.05 level (2-tailed). * $p < .05$

Table 2 – continued

	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
Parental Supervision											
(12) - Low	1.00										
(13) - Moderate	-.078*	1.00									
(14) - High	-.481**	-.836**	1.00								
(15) Educ. Commitment	-.123**	-.072	.131**	1.00							
Club Participation											
(16) - None	.147**	.067	-.140**	-.288**	1.00						
(17) - Moderate	-.050	.029	.002	.138**	-.516**	1.00					
(18) - High	-.080*	-.093*	.126**	.112**	-.353**	-.619**	1.00				
Church Attendance											
(19) - None	.011	.007	-.012	-.065	.142**	-.028	-.100**	1.00			
(20) - Low	-.006	.018	-.012	-.102**	.001	.045	-.050	-.240**	1.00		
(21) - Moderate	.003	.036	-.033	-.046	-.013	-.005	.017	-.280**	-.311**	1.00	
(22) - High	-.007	-.054	.051	.182**	-.104**	-.011	.107**	-.338**	-.376**	-.437**	1.00
(23) Experienced Strain	.240**	.058	-.183**	-.238**	.135**	-.098**	-.016	.022	.010	.056	-.078*
(24) Vicarious Strain	.225**	.103**	-.214**	-.258**	.087*	-.048	-.027	-.036	.064	.023	-.047
(25) Anticipated Strain	.069	.094*	-.121**	-.193**	.131**	-.075*	-.038	.022	.050	.071	-.126**
(26) Neighborhood Strain	.121**	.101**	-.154**	-.200**	.154**	-.059	-.074	.002	.050	.003	-.047
(27) Age	.080*	.045	-.083*	-.086*	.025	-.084*	.068	.048	-.051	.071	-.061
(28) Living with Parents	-.046	-.057	.076*	.203**	-.044	-.026	.069	-.045	-.122**	-.066	.202**
(29) Black	-.005	-.016	.017	-.016	-.046	.051	-.014	-.058	.004	.068	-.019
(30) Hispanic	.000	-.045	.040	-.017	.066	-.019	-.039	-.077*	.031	.035	.003
(31) Other Races	.022	.068	-.072	-.080*	.041	-.029	-.006	.079*	-.052	.015	-.034

Table 2 - continued

	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)
(23) Experienced Strain	1.00								
(24) Vicarious Strain	.528**	1.00							
(25) Anticipated Strain	.356**	.398**	1.00						
(26) Neighborhood Strain	.316**	.423**	.397**	1.00					
(27) Age	-.021	.000	-.017	.002	1.00				
(28) Living with Parents	-.140**	-.136**	-.113**	-.086*	-.028	1.00			
(29) Black	.015	.075*	.030	-.043	.061	-.131**	1.00		
(30) Hispanic	.046	.262**	.132**	.295**	-.083*	.031*	-.120**	1.00	
(31) Other Races	.097**	.003	.021	.052	.000	-.053	-.076*	-.121**	1.00

** . Correlation is significant at the 0.01 level (2-tailed). **p<.01

*. Correlation is significant at the 0.05 level (2-tailed). *p<.05

Findings from the Logistic Regression Analysis

The logistic regression analysis develops a series of six block models. Table 4.3 presents the logistic regression results of the first model with the theoretical variables drawn from Differential Association/Social Learning Theory, including the presence of delinquent peers, delinquent friends, male family members who carry guns, and gang membership. The -2 log likelihood for the model is 180.372. The model chi-square coefficient is 87.101 and is significant at the .001 level.

The analysis revealed that three of the four independent variables in the model had a significant relationship with the dependent variable. More extensive associations with delinquent peers and delinquent friends were both found to be positively associated with a juvenile carrying a gun ($p < .001$). In addition, being a member of a gang was also found to be positively associated with a juvenile carrying a gun. A juvenile's living in a

residence where men in the household carry guns was not found to be significantly related to juvenile firearms carrying. The Nagelkerke pseudo r-square was .371, suggesting the logistic regression model has a moderate goodness-of-fit.

Table 4.4 presents the logistic regression results of the second model with theoretical variables drawn from Social Control Theory including the measurements for moderate and high parental attachment, moderate and high teacher attachment, moderate and high parental supervision, commitment to conventional education, moderate and high participation in school clubs, and low, moderate and high church attendance. The -2 log likelihood for the model is 249.687. The model chi-square coefficient is 45.971 and is significant at the .001 level.

The analysis revealed three independent variables in the model had a significant relationship with juvenile firearms carrying. High parental supervision and commitment to conventional education were both found to be negatively associated with the dependent variable at the .001 level of significance. High teacher attachment was negatively associated with juvenile firearms carrying at the .01 level of significance. The remaining independent variables in the logistic regression analysis were not significant. The Nagelkerke pseudo r-square was .185, suggesting a low goodness-of-fit for this logistic regression model. Consistent with previous research, this model shows that parental supervision contributes to juveniles not carrying firearms (Orpinas, Murray, and Kelder 1999; Luster and Oh 2001).

Table 4.3 Regression for Differential Association/Social Learning Theoretical Variables

Variable	B	S.E.	Wald	Sig.
<i>Dependent Variable</i>				
Carry Gun				
<i>Independent Variables</i>				
(Differential Association/ Social Learning Theory)				
Delinquent Peers	.691	(.216)	10.209	.001***
Delinquent Friends	.485	(.144)	11.276	.001***
Men Carry Guns	.246	(.437)	.318	.573
Member of Gang	1.156	(.460)	6.328	.012*
Intercept	-5.871***			
-2 log-likelihood	180.372			
Chi-Square	87.101***			
Nagelkerke pseudo r-square	.371			
	n = 656			

Relationship is significant at the 0.001 level (2-tailed). ***p<.001

Relationship is significant at the 0.01 level (2-tailed). **p<.01

Relationship is significant at the 0.05 level (2-tailed). *p<.05

Table 4.4 Regression for Social Control Theoretical Variables

Variable	B	S.E.	Wald	Sig.
<i>Dependent Variable</i>				
Carry Gun				
<i>Independent Variables</i>				
(Social Control Theory)				
Parental Attachment				
- Moderate	.341	(1.417)	.058	.810
- High	.974	(1.392)	.490	.484
Teacher Attachment				
- Moderate	-1.112	(.599)	3.442	.064
- High	-1.600	(.570)	7.866	.005**
Parental Supervision				
- Moderate	-.872	(.611)	2.036	.154
- High	-1.835	(.532)	11.886	.001***
Educational Commitment	-.607	(.175)	12.017	.001***
Club Participation				
- Moderate	.420	(.449)	.875	.350
- High	.296	(.548)	.292	.589
Church Attendance				
- Low	-.202	(.592)	.117	.733
- Moderate	.371	(.540)	.471	.493
- High	.344	(.541)	.404	.525
Intercept	.968			
-2 log-likelihood	249.687			
Chi-Square	45.971***			
Nagelkerke pseudo r-square	.184			
	n = 703			

Relationship is significant at the 0.001 level (2-tailed). ***p<.001

Relationship is significant at the 0.01 level (2-tailed). **p<.01

Relationship is significant at the 0.05 level (2-tailed). *p<.05

Table 4.5 presents the logistic regression results of the third model with theoretical variables drawn from Strain Theory, including the presence of experienced strain, vicarious strain, anticipated strain, and neighborhood strain. The -2 log likelihood for the model is 195.013. The model chi-square is 61.305 and is significant at the .001 level.

The analysis revealed that only vicarious strain is significantly related to juvenile firearms carrying, with a positive relationship at the .001 level of significance. In this model, neither experienced, anticipated, nor neighborhood strain were significantly related to the dependent variable. The Nagelkerke pseudo r-square was .276, suggesting the regression has a weak to moderate goodness-of-fit.

Table 4.6 presents the logistic regression results of the fourth model with the set of control variables, including the juvenile's age, living arrangements, and race. The -2 log likelihood for the model is 281.879. The model chi-square is 9.737 but is not significant. Reflecting the insignificant model chi-square statistic, the Nagelkerke pseudo r-square was .040. While the logistic regression coefficient for being Hispanic was positive and significant, this relationship cannot be viewed as substantially meaningful since the model chi-square statistic is not significant.

Table 4.7 presents the logistic regression results of the fifth model with theoretical variables drawn from all three theories: Differential Association/Social Learning, Social Control, and Strain. The -2 log likelihood for the model is 135.215. The model chi-square coefficient is 95.063 and is significant at the .001 level.

Table 4.5 Regression for Strain Theoretical Variables

Variable	B	S.E.	Wald	Sig.
<i>Dependent Variable</i>				
Carry Gun				
<i>Independent Variables</i>				
(Strain Theory)				
Experienced Strain	.107	(.096)	1.239	.266
Vicarious Strain	.794	(.180)	19.567	.001***
Anticipated Strain	-.050	(.164)	.094	.759
Neighborhood Strain	.141	(.089)	2.520	.112
Intercept	-4.509***			
-2 log-likelihood	195.013			
Chi-Square	61.305***			
Nagelkerke pseudo r-square	.276			
	n = 662			

Relationship is significant at the 0.001 level (2-tailed). ***p<.001

Relationship is significant at the 0.01 level (2-tailed). **p<.01

Relationship is significant at the 0.05 level (2-tailed). *p<.05

The analysis revealed three independent variables in the model had a significant relationship with juvenile firearms carrying. Delinquent friends and gang membership were positively related to juvenile firearms carrying at the .05 level of significance. And

vicarious strain was positively associated with juvenile firearms carrying at the .01 level of significance. The remaining independent variables in this block model were not significant. The Nagelkerke pseudo r-square was .461, suggesting a moderately strong goodness-of-fit for the model.

Table 4.6 Regression for Control Variables

Variable	B	S.E.	Wald	Sig.
<i>Dependent Variable</i>				
Carry Gun				
<i>Control Variables</i>				
Juvenile's Age	-.255	(.222)	1.324	.250
Living with Parents	-.488	(.344)	2.007	.157
Black	.427	(.647)	.436	.509
Hispanic	.945	(.397)	5.664	.017*
Other Races	.704	(.574)	1.503	.220
Intercept	1.351			
-2 log-likelihood	281.879			
Chi-Square	9.737			
Nagelkerke pseudo r-square	.040			
	n = 719			

Correlation is significant at the 0.001 level (2-tailed). ***p<.001
 Correlation is significant at the 0.01 level (2-tailed). **p<.01
 Correlation is significant at the 0.05 level (2-tailed). *p<.05

Table 4.7 Regression for Diff. Association/Social Learning, Social Control, and Strain Theories

Variable	B	S.E.	Wald	Sig.
<i>Dependent Variable</i>				
Carry Gun				
<i>Independent Variables</i>				
(Differential Association/ Social Learning Theory)				
Delinquent Peers	.422	(.275)	2.355	.125
Delinquent Friends	.380	(.191)	3.972	.046*
Men Carry Guns	.338	(.540)	.392	.531
Member of Gang	1.481	(.616)	5.776	.016*
<i>Independent Variables</i>				
(Social Control Theory)				
Parental Attachment				
- Moderate Attachment	.973	(3.784)	.066	.797
- High Attachment	2.313	(3.785)	.374	.541
Teacher Attachment				
- Moderate Attachment	-1.019	(.782)	1.695	.193
- High Attachment	-1.425	(.799)	3.185	.074
Parental Supervision				
- Moderate Supervision	-.298	(.918)	.106	.745
- High Supervision	-.629	(.841)	.559	.455

Table 4.7 -- continued

Variable	B	S.E.	Wald	Sig.
Educational Commitment	-.292	(.255)	1.313	.252
Club Participation				
- Moderate Participation	.790	(.659)	1.435	.231
- High Participation	.406	(.731)	.309	.579
Church Attendance				
- Low Attendance	-.382	(.834)	.210	.647
- Moderate Attendance	.833	(.773)	1.162	.281
- High Attendance	1.044	(.764)	1.870	.171
<i>Independent Variables</i>				
(Strain Theory)				
Experienced Strain	.010	(.156)	.004	.949
Vicarious Strain	.588	(.248)	5.610	.018**
Anticipated Strain	-.251	(.224)	1.263	.261
Neighborhood Strain	.069	(.111)	.380	.538
Intercept	-6.114			
-2 log-likelihood	135.215			
Chi-Square	95.063***			
Nagelkerke pseudo r-square	.461			
	n = 580			

Relationship is significant at the 0.001 level (2-tailed). ***p<.001
 Relationship is significant at the 0.01 level (2-tailed). **p<.01
 Relationship is significant at the 0.05 level (2-tailed). *p<.05

The sixth and final logistic regression model specifies the full model, containing the measures drawn from Differential Association/Social Learning Theory, Social Control Theory, and Strain Theory, and the control variables as independent variables. The results of the analysis are displayed in Table 4.8. The -2 log likelihood for the model is 129.814. The model chi-square coefficient was 93.741 and was significant at the .001 level. This model had the highest Nagelkerke pseudo r-square of all the models at .467.

The full block model revealed delinquent friends and vicarious strain remained significant throughout, with delinquent friends being positively associated with juvenile firearms carrying at the .05 level and vicarious strain positively associated with juvenile firearms carrying at the .05 level. Delinquent peers was not significant in the final model or the logistic regression containing variables from all three theories. However, it was positively related at the .001 level of significance in the separate logistic regression for the variables drawn from Differential Association/Social Learning Theory. Gang membership was no longer significant in the full model but had been positively related to juvenile firearms carrying at the .05 level of significance in the logistic regression models containing only the Differential Association/Social Learning Theory variables and the variables from all three theories. Male family members carrying guns was not significant in any of the block models. Measurements for parental attachment, teacher attachment, parental supervision, commitment to conventional education, school club participation, and church attendance were not significant in the full model or the logistic regression with variables from all three theories.

Table 4.8 Regression for Full Model

Variable	B	S.E.	Wald	Sig.
<i>Dependent Variable</i>				
Carry Gun				
<i>Independent Variables</i> (Differential Association/ Social Learning Theory)				
Delinquent Peers	.436	(.286)	2.326	.127
Delinquent Friends	.450	(.206)	4.764	.029*
Men Carry Guns	.254	(.564)	.203	.653
Member of Gang	1.320	(.692)	3.637	.057
<i>Independent Variables</i> (Social Control Theory)				
Parental Attachment				
- Moderate Attachment	.996	(4.105)	.059	.808
- High Attachment	2.432	(4.133)	.346	.556
Teacher Attachment				
- Moderate Attachment	-.968	(.800)	1.464	.226
- High Attachment	-1.480	(.817)	3.278	.070
Parental Supervision				
- Moderate Supervision	-.201	(.990)	.041	.839
- High Supervision	-.589	(.934)	.398	.528
Educational Commitment	-.427	(.268)	2.536	.111

Table 4.8 -- continued

Variable	B	S.E.	Wald	Sig.
Club Participation				
- Moderate Participation	.897	(.681)	1.733	.188
- High Participation	.570	(.762)	.559	.455
Church Attendance				
- Low Attendance	-.413	(.882)	.220	.639
- Moderate Attendance	.964	(.831)	1.346	.246
- High Attendance	1.297	(.834)	2.418	.120
<i>Independent Variables</i> (Strain Theory)				
Experienced Strain	-.009	(.166)	.003	.955
Vicarious Strain	.629	(.262)	5.788	.016*
Anticipated Strain	-.245	(.226)	1.174	.279
Neighborhood Strain	.078	(.122)	.404	.525
<i>Control Variables</i>				
Age	-.550	(.354)	2.408	.121
Living with Parents	-.041	(.559)	.005	.942
Black	-.948	(.924)	1.052	.305
Hispanic	-.157	(.655)	.057	.811
Other Races	-.093	(1.280)	.005	.942
Intercept	3.220			
-2 log-likelihood	129.814			
Chi-Square	93.741***			
Nagelkerke pseudo r-square	.467			
	n = 564			

Relationship is significant at the 0.001 level (2-tailed). ***p<.001

Relationship is significant at the 0.01 level (2-tailed). **p<.01

Relationship is significant at the 0.05 level (2-tailed). *p<.05

However, in the separate logistic regression containing only the variables from Social Control theory, commitment to conventional education and high parental supervision were both negatively related to juvenile firearms carrying. High parental supervision was significant at the .001 level, and high teacher attachment was significant at the .01 level. When statistically controlling for all the theoretical variables, none of the control variables were found to be significant.

CHAPTER 4 - DISCUSSION AND CONCLUSIONS

Outcomes of Hypothesis Tests

The outcomes of the tests of study hypotheses are displayed in Table 5.1. Only two of the study hypotheses were fully supported by the multivariate logistic regression analysis. Statistically controlling for the other differential association/social learning variables, social control variables, strain variables, and control variables, having a higher level of association with friends involved in gun-related delinquency was found to be positively associated with a juvenile carrying a gun. Thus, H2 was supported by the findings. Statistically controlling for the other strain variables, differential association/social learning variables, social control variables, and control variables, being exposed to a higher level of vicarious strain was found to be positively associated with a juvenile carrying a gun. Therefore, H12 was supported by the study findings.

Five of the study hypotheses (H1, H4, H6, H7, H8) were partially supported by statistical relationships found in the lower order block models. Having a higher level of association with peers involved in gun-related delinquency was found to be positively associated with a juvenile carrying a gun when controlling only for other differential association/social learning variables. This relationship became insignificant once the social control, strain, and other control variables were introduced into the logistic regression model.

Being a member of a gang was found to be positively associated with a juvenile carrying a gun when controlling only for other differential association/social learning variables. This positive relationship persisted when statistically controlling for the social control and strain variables. However, once age, living arrangements, and race/ethnicity

were controlled for in the logistic regression model, this relationship became insignificant.

Having a high level of teacher attachment, parental supervision, and commitment to education were all found to be negatively associated with a juvenile carrying a gun when considering only the variables from Social Control Theory. However, these relationships all became insignificant when the variables drawn from Differential Association/Social Learning Theory and Strain Theory were introduced, and when the control variables were introduced into the logistic regression model.

Discussion

This study provided comparable findings with previous research on juvenile firearms carrying. Akers (1973, 1998) demonstrated that delinquent role models like peers and friends increased the likelihood of deviant behavior. This study also provided support for this concept in regard to juvenile firearms carrying, consistent with the findings in other studies (Bailey, Flewelling, and Rosenbaum 1997; Malek, Chang, and Davis 1998; Kingery, Coggeshall, and Alford 1999; Lizotte and Sheppard 2001).

However, Sheley and Brewer (1995), Hemenway, et al. (1996), and Cunningham, et al. (2000) reported that one of the strongest correlates of juvenile firearms carrying were carrying by family members. In consistent with previous research, this study showed no relationship at all to men in the home carrying firearms and juvenile firearms carrying.

Mixed results have been reported on the influence of parent-juvenile attachment and juvenile firearms carrying. Some studies suggested a positive relationship with parents that is inversely related to weapon carrying (Bailey, Flewelling, and Rosenbaum

1997; Orpinas, Murray, and Kelder 1999; Luster and Oh 2001). While a study by Kingery, Coggeshall, and Alford (1999) reported a positive parent-child relationship was unrelated to firearms carrying. This study provided no support for the importance of parental attachment to decreasing juvenile firearms carrying, and only partial support for parental monitoring.

Previous research reported that school environments in which juveniles felt cared about and connected to the teachers and community of the school, showed a negative association with firearms carrying (Kingery, Coggeshall, and Alford 1998; Mulvey and Cauffman 2001). This study provided partial evidence supporting previous studies, showing that commitment to education and relational connection with teachers influences juveniles firearms carrying.

Congruent with preceding research, this study contributed little to the examination of demographic variables in regards to their impact on juvenile firearms carrying. Regardless of the extensive research on juvenile weapon carrying, there is very little consensus among researchers academics as to the impact of demographic variables. For example, there are inconsistencies in the research on the relationship between age and firearms carrying. Studies by Simon, Dent, and Sussman (1997), DuRant, et al. (1999) and Lizotte and Sheppard (2001) found that older juveniles are more likely than younger juveniles to carry firearms. However, other studies showed that weapon carrying among high school students actually decreases with age (Kann et al.1996, 1998; Kulig et al. 1998; Hill and Drolet 1999; Forrest, Zychowski, Stuhldreher, and Ryan 2000). Finally, Kingery, Coggeshall, and Alford (1999) and Wilcox (2000) found no significant

correlation between age and weapon carrying. Age was never significant with the influence of juvenile firearms carrying in this study.

Race fares no better in the literature. Most of the research proposed that minorities are more likely than whites to carry weapons (Kingery, Pruitt, and Heuberger 1996; Kann et al. 1996, 1998, 2000; Hill and Drole, 1999; Simon, Crosby, and Dahlberg 1999; Forest, et al. 2000; Wilcox and Clayton 2001). Several other studies found no significant relationship between race/ethnicity and firearms carrying (Callahan, Rivara, and Farrow 1993; Sheley and Crewer 1995; and Kulig, Valentine, Griffith, and Ruthazer 1998). Finally, a few studies found that whites were more likely to own and carry guns than racial/ethnic minorities (Lizotte, Tesoriero, Thornberry, and Krohn 1994; Puzzanchera 2000). In this study, Hispanics initially showed a greater likelihood of juvenile firearms carrying but dropped out when the theoretical variables were introduced. No other racial category was ever significant.

Findings of the Explanatory Power of the Theories

In comparing the explanatory power of Differential Association/Social Learning Theory, Social Control Theory, and Strain Theory, the findings from this study suggest that Differential Association/Social Learning Theory had the most explanatory power of the three theories in relation to juvenile firearms carrying. This conclusion is based on two pieces of evidence: (a) the Nagelkerke pseudo r-square coefficient was the highest (Nagelkerke pseudo r-square=.371) in the first block model containing only the differential association/social learning variables, compared to block models two and three that contained only the social control (Nagelkerke pseudo r-square=.184) and strain variables (Nagelkerke pseudo r-square=.276), respectively; and (b) the differential

association/social learning variables had more explanatory power in the full model compared to the strain variables (Note: the Nagelkerke pseudo r-square decreased to .391 when the differential association/social learning variables were taken out of the full model. When strain variables were taken out of the full model, the Nagelkerke pseudo r-square decreased to .447.).

In addition to associating with friends engaged in gun and weapons-related delinquency, associating with peers engaged in gun and weapons-related delinquency and being a member of a gang were also found to be significantly associated with juvenile arms carrying in the first block model containing only the differential association/social learning variables. These findings support the theoretical proposition that, as youths spend considerable time with companions who are regularly involved in delinquent behavior, they learn the attributes of delinquency and begin to define it as acceptable, thereby increasing the likelihood that they too will engage in delinquent behavior. Once the social control, strain, and control variables were introduced into the logistic regression model, however, the effects of association with delinquent peers and gang membership became insignificant.

One possible explanation for this pattern of findings may be related to the nature of the relationships involved in these associations. Peers represent more distant associations involving less familiarity. Juveniles may associate with peers as acquaintances. They may even view them as role models or people that they look up to as a reference group. Friends, on the other hand, signify a deeper relationship in which the individual feels a close, if not familial-like, familiarity and emotional bond. Gang participation could involve association with either delinquent peers or friends. A juvenile

carrying a gun represents a serious form of delinquent behavior that could ultimately lead to even more serious criminal behavior (e.g., murder, armed robbery). As a result, only associations with close friends who engage in gun and weapons-related delinquency are powerful enough to prompt a juvenile to engage in such a serious form of delinquency, when also taking into account social control factors, strain factors, age, family situation, and race & ethnicity. A second possible explanation for the loss of significance of these variables is due to statistical attributes unique to the data that were used (e.g., loss of cases due to missing data).

The study findings indicate that Strain Theory has some utility in identifying determinants of juvenile firearms carrying. The literature suggests that the strain directly experienced by the juvenile (i.e., experienced strain) should be the strongest predictor of juvenile firearms carrying. However, in this study, vicarious strain was found to be the only significant predictor of juvenile firearms carrying. According to Agnew (2002, 2006), a juvenile experiences vicarious strain when those around them to whom they feel a close connection, most notably friends and family, experience difficulty. This has a tendency to bring out a protective nature within the juvenile, which in this case, has the potential to increase the probability of juvenile firearms carrying. Experiencing neighborhood strain would also seem to be important in this manner. However, it did not have a significant effect in this study. One potential explanation for this is that juveniles have a stronger relationship with family and friends compared to acquaintances within their neighborhood. As a result, juveniles become more likely to engage in an extreme form of delinquency such as carrying a gun, only when those with whom they have strong ties experience strain.

Social Control Theory was found to have the least utility in explaining why juveniles do/do not carry guns. In the second block model containing only the variables for Social Control Theory, high teacher attachment, high parental attachment, and commitment to conventional education were found to have a negative relationship with juvenile firearms carrying. This is consistent with Social Control Theory which contends that these factors serve to inhibit delinquent behavior. However, these variables became insignificant in subsequent block models when controlling for differential association/social learning factors, strain factors, age, family situation, and race & ethnicity. One possible explanation for this is that these variables are not theoretically relevant and do not systematically work to inhibit a serious form of delinquency such as carrying a gun. A second possible explanation for the loss of significance of these variables is due to statistical attributes unique to the data that were used (e.g., loss of cases due to missing data).

The findings from the full model indicate that associating with friends who engage in gun and weapons-related delinquency and having friends and family who experience strain are the two key factors that promote gun carrying among U.S. juveniles that were included in the sample. In effect, when a juvenile becomes embedded in a communal social network which embraces a subculture where gun carrying and gun-related delinquency is enacted, valued and reinforced, and members of that communal network experience strain, then the probability that the juvenile will also carry a gun is increased. Further, social control factors appear to have no systematic effect in inhibiting this process. The open question from this is, “Why does gun carrying become part of the group subculture?” The strain experienced by members of the network provides a

potential explanation. However, given the limitations of the research design employed in this study, this conjecture is purely speculative. Obviously, having an economic infrastructure and regulatory system which makes guns easily available to juveniles makes this possible. But, it does not explain why juveniles choose to make gun carrying a cultural element of their communal social network.

Discussion of the Most Significant Findings

Delinquent friends and vicarious strain were the variables most significant in this study leading to a discussion regarding a possible integration of the theories of differential association/social learning and strain as a potentially stronger explanation of juvenile firearms carrying. Very little has been done specifically combining the concepts of these two theories but some integrative attempts has been made with social learning and strain in mind. Research by Elliott and his associates (1979, 1985) postulate that strains within the family, school, and community contexts of a juvenile, which would include vicarious strain, will weaken social bonds, which in turn increases associations with delinquent friends. The conceptual integration theory by Pearson and Weiner (1985) takes into account such factors as delinquent friends, and family and community struggles that lead to strain and influence social learning. Braithwaite's (1989, 2001) reintegrative shaming theory concluded that all types of strain, which would include vicarious strain, can weaken the social bonds and contribute to shaming the juvenile. This, in turn, can impel the juvenile into closer associations with delinquent friends.

The bivariate correlation between delinquent friends and vicarious strain was the strongest in the correlation matrix. Vicarious strain had a positive, significant relationship with delinquent friends ($r = .531$) at the .01 level of significance. This

finding, in addition to these two variables remaining constant throughout the block model logistic regression analysis, provides evidence to suggest as a goal the integration of Differential Association/Social Learning and Strain Theories. A pursuit of theoretical integration regarding serious forms of delinquency like juvenile firearms carrying could be an important contribution to increased understanding of the problem and enhanced safety of the young people in this country and their families and communities.

Table 5.1 Outcomes for Study Hypotheses

Hypotheses	Outcome
<u>Hypotheses from Differential Association/Social Learning Theory:</u>	
H1: More extensive association with peers involved in gun-related delinquency will be positively related to juvenile firearms carrying.	Partially Supported
H2: More extensive association with friends involved in gun-related delinquency will be positively related to juvenile firearms carrying.	Fully Supported
H3: Having other male family members carrying firearms will be positively related to juvenile firearms carrying.	Not Supported
H4: Gang membership will be positively related to juvenile firearms carrying.	Partially Supported
<u>Hypotheses from Social Control Theory:</u>	
H5: A higher level of parental attachment will be negatively related to juvenile firearms carrying.	Not Supported
H6: A higher level of teacher attachment will be negatively related to juvenile firearms carrying.	Partially Supported
H7: A higher level of parental supervision will be negatively related to juvenile firearms carrying.	Partially Supported
H8: A higher level of commitment to conventional education will be negatively related to juvenile firearms carrying.	Partially Supported
H9: More extensive school club participation will be negatively related to juvenile firearms carrying.	Not Supported
H10: More frequent attendance at religious services will be negatively related to juvenile firearms carrying.	Not Supported
<u>Hypotheses from Strain Theory:</u>	
H11: A higher level of experienced strain will be positively related to juvenile firearms carrying.	Not Supported
H12: A higher level of vicarious strain will be positively related to juvenile firearms carrying.	Fully Supported
H13: A higher level of anticipated strain will be positively related to juvenile firearms carrying.	Not Supported
H14: A higher level of neighborhood strain will be positively related to juvenile firearms carrying.	Not Supported

Limitations of the Study

This study is characterized by a number of limitations. The data set by Sheley and Wright, *National Survey of Weapons-Related Experiences, Behaviors, and Concerns of High School Youth in the United States*, 1996, collected useful information from a broad sample of high-school aged youth with diverse histories, and cultural backgrounds, including juveniles from a range of community sizes, economic situations, and class, race, and ethnic backgrounds. In addition, information was collected on a wide range of characteristics and behaviors related to a juvenile's family, peers, school life and social life. However, it was not specifically designed to measure the strength and explanatory power of the three delinquency theories examined in this study.

This data set does not contain measures of all variables found in the three theories. In other cases, variables are measured differently compared to other studies. For example, the measurement I used for vicarious strain was a scale developed that included some questions asking if the respondent had seen "someone" or "anyone" stabbed, shot, or killed. Someone or anyone may not be what Agnew (2002, 2006) desired to tap into when measuring this type of strain. The literature seems to support a more intimate relationship with family and friends when analyzing the influence of vicarious strain.

Another limitation is the demographic make-up of the respondents in the survey. First, the sample does not include enough young people regularly involved in delinquency. Further, the respondents are overwhelmingly white (70%); sixty-two percent live with both biological parents; eighty-three percent have high parental attachment; eighty-four percent have high parental supervision; seventy-two percent have

high teacher attachment; seventy-seven percent have either moderate or high school club participation; and, sixty-two percent have either moderate or high church attendance. In contrast, only eight percent claimed to be in gangs and only six percent stated they had carried firearms outside the home for reasons other than hunting or sport shooting. Greater representation on the dependent variable would allow for a better test of theoretical framework employed in this study.

Additionally, the data set by Sheley and Wright did not have any questions asking about the respondents' involvement in or use of mass media technologies. Many of the current studies include these types of measurements because of a fervent concern regarding exposure to television, video games, and the Internet, and the influences these media may have on delinquency, including juvenile firearms carrying.

One final limitation is the number of missing values on the key study variables. The test of the full model was based on a substantially smaller number of cases compared to the partial block models estimated beforehand. Given the sample size, it is likely that the loss of cases had an impact on the statistical findings.

Recommendations for Future Research

Future research on juvenile firearms carrying would benefit from primary data collection that could be designed specifically to create measures assessing the three theoretical perspectives. Further, the study should be designed to secure a greater representation of juveniles who have carried firearms, and youths more regularly involved in delinquent behavior.

Theory Integration

The theories of Differential Association/Social Learning, Social Control, and Strain present different approaches to their explanation of juvenile firearms carrying, however, they do so with some overlap in the aspects and procedures used in their analyses. Each theory has been developed with some empirical support and concluded to explain some, but not all, of the contributors to delinquent behavior (Vold, Bernard, and Snipes 2002). Traditionally, there has been an antagonist relationship surrounding theoretical competition and theoretical integration. Theoretical competition and theoretical integration have been a part of the testing and further expansion of delinquency theories within sociology. Theory competition has been the most widespread method of evaluating sociological theory and it involves directly testing and comparing theories similarly to this study. Elliott, Huizinga, and Ageton (1985) have suggested that this method has failed, as each of the theories gaining acceptance only explains 10-20 percent of the variance in delinquent behavior. Bernard (1991) claims the abundance of sociological theories that are a part of the discourse and analysis of delinquent behavior has actually inhibited scientific progress. As a result, a deeper look at theoretical integration would be useful in better understanding serious forms of delinquency. An understanding of the types of theoretical integration already attempted and the attitudes of these researchers towards theory integration will demonstrate the feasibility of an approach that will integrate components of differential association/social learning and strain theory in relation to juvenile firearms carrying and other serious forms of delinquency.

Types of Theory Integration

Liska, Krohn, and Messner (1989) advocated conceptual and propositional as two types of theory integration. Conceptual theory integration involves uncovering and resolving those concepts within different theories that have similar meanings and merging them into a language that have stronger explanatory capacity (Einstader and Henry 2006). Propositional integration involves linking different theories by demonstrating how two or more theories make similar predictions about delinquency, despite the fact that each theory begins their explanations with different hypotheses and assumptions (Paternoster and Bachman 2001).

Additionally, theoretical integration can include interdisciplinary and interdisciplinarity assimilations of theory. Interdisciplinary integration includes theories from different fields of study such as sociology, psychology, and biology. Since most researchers focus on their own disciplines, and typically have limited knowledge of theories within other fields, this type of integration rarely happens. The more widespread intradisciplinary integration is attempted when theories within a discipline of study are combined.

One final method towards integration is theoretical elaboration. Thornberry (1989) proposed theoretical elaboration as a negotiation somewhere between directly opposing all forms of theoretical integration and supposing that it is the only way to move theoretical development forward. Theoretical elaboration involves a systematic study and logical extension of a specific theory in an effort to improve its explanatory theory regarding crime and delinquency by expanding and revising the theory based on empirical evidence.

Research Attitudes Towards Theory Integration

Some scholars promote theory integration as crucial to developing theories of delinquency with stronger explanatory power (Kubrin, Stucky, and Krohn 2009). Theory integration can be defined as “the combination of two or more pre-existing theories, selected on the basis of their perceived commonalities, into a single re-formulated theoretical model with greater comprehensive and explanatory value than any one of its component theories” (Farnworth 1989: 95).

Debate over whether theory integration contributes to the overall effectiveness of explaining delinquency has been going on for over three decades. The debate initially began in the 1970s where discourse regarding arguments both for and against theory integration were presented in a special edition of the *Journal of Research in Crime and Delinquency* (Kubrin, Stucky, and Krohn 2009). Elliott, Ageton, and Canter (1979) argued for theory integration and Hirschi (1979) argued against it. The fact is, most theories bring together an assortment of ideas and concepts derived from a specific historical context. For example, Cohen (1955), Cloward (1959), and Cloward and Ohlin (1960) did their research within the historical time period of the development of the Chicago School of Sociology, and while doing it they integrated concepts with the anomie tradition (Williams and McShane 1999).

Hirschi (1989) contends that most theories cannot be integrated because they are incompatible regarding core assumptions. For example, Differential Association/Social Learning Theory presupposes that juveniles are not naturally inclined to delinquency but become delinquent through their associations with deviant others. Social Control Theory, on the other hand, assumes individuals are naturally inclined towards delinquency, but

are precluded from doing so by their bonds to conventional society. As a result, Hirschi (1989) claimed we already have too many theories and he supports that traditional theories simply be better developed. Paternoster and Bachman state, “there are too many explanations of crime that clutter the theoretical landscape” (2001: 304).

Several researchers disagree, claiming that rather than developing even more theories what is needed is to integrate the ideas, concepts, and explanatory power of existing theories (Elliot, Ageton, and Canter 1979; Elliott, Huizinga, and Ageton 1985; Pearson and Weiner 1985; Messner, Krohn, and Liska 1989; Akers 2000; Bernard 2001; and Robinson 2004). Bernard and Snipes (1996) argued that theories looking at delinquency do make diverse predictions regarding deviant behavior but they are not necessarily incompatible.

Elliott, Ageton, and Canter (1979) attempted one of the initial developments of a genuinely integrated theory, merging social learning, social control, and strain into a single model of explaining delinquency. Adding to this original work, Elliott, Huizinga, and Ageton (1985) asserted that none of these three theories by themselves explained delinquency as well as the paradigm they developed in their research. Elliott and his associates (1979, 1985) claim it is very different to be an isolated juvenile with weak bonds to conventional peer, family, and community groups versus a juvenile highly committed to and involved with similar groups. As a result, they contend there are two principal avenues to juvenile delinquency that combine explanations of Differential Association/Social learning, Social control and Strain theories. First, the weak bonds of social control to conventional society contribute to exposure and commitment to the differential associations of delinquent social groups, which then leads to increased

delinquent behavior. And secondly, the strong bonds of social control to conventional society can be conditioned by the strains that encourage these bonds, possibly leading to exposure and commitment to the differential associations of delinquent social groups.

The Future of Theory Integration and Juvenile Firearms Carrying

One problem with the advancement of theoretical integration is where the focus lies when attempting to integrate. Bernard and Snipes (1996) describe the problem of previous attempts at integration being the focus on the theories themselves instead of the variables demonstrated empirically to predict delinquency. They suggest that rather than beginning the research looking at previous theories studied in the literature, concentrate on the observable variables and their relationships while explaining delinquent behavior.

Specialization within and across academic disciplines, including the psychological component of Skinnerian or operant conditioning utilized in the development of sociology's Social Learning Theory, might suggest a future attempt at theory integration when assessing things like violent juvenile delinquency and firearms carrying. While these theories of delinquency provide some direction in comprehending the causes of violent delinquency and juvenile firearms carrying, a consideration of the possibility for the further understanding of these issues by taking into account the interaction of the different features categorized in the individual theories might be in order. Criminal psychologist Lonnie Athens states, the "real key to discovering how people become dangerous violent criminals is in developing a strategy that allows us to integrate the effects of the social environment and internal processes within the individual" (1989: 14). Athens concludes that studying social environment and experience is essential to understanding the criminal mind, but social environment is not

disconnected from the individuals psychology. This suggests the possibility of combining various attributes of differential association, social control, and anomie/strain into an integrated theory. A new round of discourse and debate may surface as continued attempts at theory integration bring fresh insights and competition to the effort of better explaining and predicting juvenile delinquency, including juvenile firearms carrying.

Policy Implications

Findings from this study show the important impact relationships with delinquent friends and strain on individuals close to the young person can have on juvenile firearms carrying. Parents/guardians, educators and school administrators, government officials and researchers can all help improve these conditions to prevent this problem from continuing to destroy lives and communities.

Parents and guardians should be encouraged and educated on the importance of a residential environment that provides guidance and supervision of the juveniles residing in the home. Family education professionals should provide programs to assist in this process to insure the parents/guardians have the skills and resources to decrease the likelihood of young people developing strong associations with individuals who are likely to encourage them to become involved in delinquent behavior, which can include firearms carrying.

This study provides some support for the concept that when a young person is committed to conventional school activities and getting good grades they are less likely to carry firearms. Adolescents are extremely susceptible to what their peer groups are involved in. Schools can be another avenue of preventing delinquent friendships and student strain by providing assistance to students to help them make connections with

young people who are successful in the classroom and committed to school programs and activities. Also, by dealing with this issue at school and educational institutions, young people who may be struggling at home or in their neighborhoods may have the opportunity to improve their situations, and avoid the pitfalls of negative relationships and carrying firearms.

Finally, government officials can improve the conditions conducive to juvenile firearms carrying by supporting and funding research focusing on theory integration, which as suggested previously can potentially provide a stronger understanding and predictive capability of the destructive problem of juvenile violence and firearms carrying.

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APPENDIX A - DESCRIPTION OF MEASURES

Dependent Variable

CARRY GUN

(Coded – cagun3)

Within the past 12 months, about how often would you say you've carried a gun with you when you were outside your home?

- Never = 0 (N = 691)
- Occasionally = 1 (N = 29)
- Most of the Time = 2 (N = 8)
- All of the Time = 3 (N = 3)
- 9 = missing data

(Coded – CAGUN5)

I recoded cagun3 to those who have EVER (yes = 1) carried a gun or NEVER carried a gun (no = 0) outside the home in the last 12 months

- No = 0 (N = 691)
- Yes = 1 (N = 40)

Differential Association/Social Learning Variables

Delinquent Peers Scale

Cronbach's Alpha = .738

See Other Kids Carry Guns in Neighborhood

(Coded – kidcagun2)

In the past 12 months, have you personally seen other kids carrying guns in your neighborhood?

- Never = 0 (N = 498)
- Rarely = 1 (N = 0)
- Sometimes = 2 (N = 209)
- Often = 3 (N = 20)
- 9 = missing data

(Coded – **kidcagun3**)

Recoded kidcagun2 into a binary variable,
0 = 0; 1, 2, and 3 = 1

- No = 0 (N = 498)
- Yes = 1 (N = 229)

**See Neighborhood Kids Carry Knives
as Weapons**

(Coded – **kidcakni2**)

Have you seen other kids carrying knives as
weapons in your neighborhood?

- Never = 0 (N = 363)
- Rarely = 1 (N = 181)
- Sometimes = 2 (N = 131)
- Often = 3 (N = 52)
- 9 = missing data

(Coded – **kidcakni3**)

Recoded kidcakni2 into a binary variable,
0 = 0; 1, 2, and 3 = 1

- No = 0 (N = 363)
- Yes = 1 (N = 364)

See Other Juveniles with Guns at School (Coded – **stugun2**)

Have you personally seen other students
with guns on school grounds?

- Never = 0 (N = 528)
- Rarely = 1 (N = 147)
- Sometimes = 2 (N = 40)
- Often = 3 (N = 11)
- 9 = missing data

(Coded – **stugun3**)

Recoded stugun2 into a binary variable,
0 = 0; 1, 2, and 3 = 1

- No = 0 (N = 528)
- Yes = 1 (N = 198)

See Other Juveniles with Knives at School (Coded – stuknife2)

Have you personally seen other students with knives carried as weapons on school grounds?

- Never = 0 (N = 322)
- Rarely = 1 (N = 247)
- Sometimes = 2 (N = 122)
- Often = 3 (N = 36)
- 9 = missing data

(Coded – stuknife3)

Recoded stuknife2 into a binary variable, 0 = 0; 1, 2, and 3 = 1

- No = 0 (N = 322)
- Yes = 1 (N = 405)

Delinquent Friends Scale

Cronbach's Alpha = .654

Think about the kids you spend a lot of time with:

Juvenile's Friends Own Guns

(Coded – frown2)

About how many of these people would say own a gun?

- None = 0 (N = 375)
- Some = 1 (N = 258)
- Most = 2 (N = 58)
- All = 3 (N = 36)
- 9 = missing data

(Coded – frown3)

Recoded frown2 into a binary variable, 0 = 0; 1, 2, and 3 = 1

- No = 0 (N = 375)
- Yes = 1 (N = 352)

Juvenile's Friends Regularly Carry Guns (Coded – frcarry2)

How many make a habit of carrying a gun outside the home but not for hunting or sport shooting?

- None = 0 (N = 606)
- Some = 1 (N = 89)
- Most = 2 (N = 5)
- All = 3 (N = 5)
- 9 = missing data

(Coded – frcarry3)

Recoded frcarry2 into a binary variable, 0 = 0; 1, 2, and 3 = 1

- No = 0 (N = 606)
- Yes = 1 (N = 94)

Juveniles Friends Been in Jail

(Coded – frjail2)

Have any of the friends you spend a lot of time with ever served time in a prison, reformatory, or jail?

- No = 0 (N = 533)
- Yes = 1 (N = 177)
- 9 = missing data

Juvenile's Friends Shoot Someone

(Coded – frshoot2)

Have any of the friends you spend a lot of time with ever shot anyone?

- No = 0 (N = 675)
- Yes = 1 (N = 54)
- 9 = missing data

Juvenile's Friends Been Shot

(Coded – frshot2)

Have any of the friends you spend a lot of time with ever been shot?

- No = 0 (N = 648)
- Yes = 1 (N = 81)
- 9 = missing data

Men Carry Guns Outside of Home

(Coded – **mencarry2**)

How many carry a gun outside the home, but not for hunting or sport shooting?

- None of Them = 0 (N = 567)
- Some of Them = 1 (N = 122)
- Most of Them = 2 (N = 16)
- All of Them = 3 (N = 2)
- 9 = missing data

(Coded – **mencarry3**)

Recoded mencarry2 into a binary variable, 0 = 0; 1, 2, and 3 = 1

- No = 0 (N = 567)
- Yes = 1 (N = 140)

Member of a Gang

(Coded – **ingang2**)

Do you consider yourself a member of gang?

- No = 0 (N = 666)
- Yes = 1 (N = 60)
- 9 = missing data

Social Control Variables

Relationship with Adults at Home

(Coded – adultrel2)

How would you rate your relationship with your parents or the adults you live with?

- Awful = 0 (N = 5)
- Not Very Good = 1 (N = 22)
- Somewhat Good = 2 (N = 99)
- Very Good = 3 (N = 442)
- Great = 4 (N = 162)
- 99 = missing data

Recoded adultrel2 into three different binary variables measuring *parental attachment*:

(ploattach2) 0 = 2, 3, and 4; (N = 703)
1 = 0 or 1; (N = 27)

(pmodattach2) 0 = 0, 1, 3 and 4; (N = 631)
1 = 2; (N = 99)

(phiattach2) 0 = 1, 2, and 2; (N = 126)
1 = 3 and 4; (N = 604)

Relationship with Teachers

(Coded – teachrel2)

How would you rate your relationship with most of your teachers?

- Awful = 0 (N = 10)
- Not Very Good = 1 (N = 30)
- Somewhat Good = 2 (N = 167)
- Very Good = 3 (N = 438)
- Great = 4 (N = 86)
- 99 = missing data

Recoded teachrel2 into three different binary variables measuring *teacher attachment*:

(tloattach) 0 = 2, 3, and 4; (N = 691)
1 = 0 or 1; (N = 40)

(tmodattach) 0 = 0, 1, 3 and 4; (N = 564)
1 = 2; (N = 167)

(thiattach) 0 = 1, 2, and 2; (N = 126)
1 = 3 and 4; (N = 604)

Adults Know Where Juvenile is When Out (Coded – outknow3)

If you are out past 10 p.m., do your parents or the adult who is responsible for you know where you are?

- Almost Never = 1 (N = 31)
- Occasionally = 2 (N = 86)
- Fairly Often = 3 (N = 155)
- Almost Always = 4 (N = 445)
- 0 = Not Applicable
- 9 = sysmis

Recoded outknow3 into three different binary variables measuring *parental supervision*:

(psupno2) 0 = 2, 3, and 4; (N = 686)
1 = 1; (N = 31)

(psupmod2) 0 = 1, 3 and 4; (N = 631)
1 = 2; (N = 86)

(psuphi2) 0 = 1 and 2; (N = 117)
1 = 3 and 4; (N = 600)

Commitment to Conventional Education Cronbach's Alpha = .411

Students Grades in School

(Coded – stugrade2)

What grades do you usually get in school?

- Mostly A = 4 (N = 164)
- Mostly B = 3 (N = 307)
- Mostly C = 2 (N = 223)
- Mostly D = 1 (N = 31)
- Mostly F = 0 (N = 5)
- 9 = missing data

(Coded – stugrade3)

Recoded stugrade2 into a binary variable,
0 and 1 = 0; 2, 3 and 4 = 1

- D and F's = 0 (N = 36)
- A, B, and C's = 1 (N = 694)

Absent from Classes

(Coded – absent2)

During the past year in school, about how often were you absent from classes?

- Never = 0 (N = 122)
- Once a Month = 1 (N = 374)
- A Few Times a Month = 2 (N = 175)
- Once a Week = 3 (N = 24)
- More than Once a Week = 4 (N = 38)
- 9 = missing data

(Coded – absent5)

Recoded absent2 into a binary variable measuring lack of absence, 2, 3, and 4 = 0; 0 and 1 = 1

- Absent Often = 0 (N = 237)
- Rarely Absent = 1 (N = 496)

Suspended or Expelled from School

(Coded – suspend2)

Have you ever been suspended or expelled from school?

- No, Never = 0 (N = 489)
- Yes, Just Once = 1 (N = 146)
- Yes, More than Once = 2 (N = 96)
- 9 = missing data

(Coded – suspend4)

Recoded suspend 2 into a binary variable measuring never suspended, 1 and 2 = 0; 0 = 1

- Never Suspended = 0 (N = 489)
- Yes, Suspended = 1 (N = 242)

Finish High School

(Coded – hschool2)

Do you think you will finish high school?

- No = 0 (N = 8)
- Probably = 1 (N = 38)
- Certainly = 2 (N = 687)
- 9 = missing data

(Coded – hschool3)

Recoded hschool2 into a binary variable,
0 = 0; 1 and 2 = 1

- No = 0 (N = 237)
- Yes = 1 (N = 496)

Go to College

(Coded – college2)

Do you plan to go to college after high school?

- No = 0 (N = 73)
- Yes, Not Right Away = 1 (N = 215)
- Yes, Right Away = 2 (N = 443)
- 9 = missing data

(Coded – college4)

Recoded college2 into a binary variable,
0 = 0; 1 and 2 = 1

- No = 0 (N = 73)
- Yes = 1 (N = 658)

Member of School Clubs

(Coded – inclubs2)

Do you participate in athletics, band, drama, or any other school organizations or clubs?

- None = 0 (N = 166)
- A Few = 1 (N = 347)
- Many = 2 (N = 217)
- 9 = missing data

Recoded inclubs2 into three different binary variables measuring *club participation*:

(noclub) 0 = 1 and 2; (N = 564)
1 = 0; (N = 166)

(modclub) 0 = 0 and 2; (N = 383)
1 = 1; (N = 347)

(hiclub) 0 = 0 and 1; (N = 513)
1 = 2; (N = 217)

Church Attendance

(Coded – gochurch2)

About how often do you attend the services of a church or religious organization?

- Never = 0 (N = 130)
- Less Than Once a Year = 1 (N = 71)
- Once a Year = 2 (N = 83)
- Several Times a Year = 3 (N = 84)
- Once a Month = 4 (N = 110)
- Every Week = 5 (N = 253)
- 9 = missing data

Recoded gochurch2 into three different binary variables measuring *church attendance*:

(**chattno**) 0 = 1, 2, 3, 4, and 5; (N = 601)
1 = 0; (N = 130)

(**chattlo**) 0 = 0, 3, 4, and 5; (N = 577)
1 = 1 and 2; (N = 154)

(**chattmod**) 0 = 0, 1, 2, and 5; (N = 537)
1 = 3 and 4; (N = 194)

(**chatthi**) 0 = 0, 1, 2, 3, and 4; (N = 478)
1 = 5 (N = 253)

Strain Variables

Experienced Strain Scale

Cronbach's alpha = .804

Adults Receive Welfare

(Coded – welfare2)

Has anyone in the home you live in received welfare, AFDC, food stamps or other forms of government assistance in the past 12 months?

- No = 0 (N = 629)
- Yes = 1 (N = 102)
- 9 = missing data
-

Threatened with Gun on School Property (Coded – sgthreat2)

Have you been threatened with a gun on school property in last 12 months?

- Never = 0 (N= 702)
- Just Once = 1 (N = 21)
- Few Times = 2 (N = 5)
- Many Times = 3 (N = 4)
- 9 = missing data

(Coded – **sgthreat4**)

Recoded sgthreat2 into a binary variable, 0 = 0; 1, 2, and 3 = 1

- No = 0 (N = 702)
- Yes = 1 (N= 30)

Shot At on School Property

(Coded – sshot2)

Have you actually been shot at on school property in last 12 months?

- Never = 0 (N = 712)
- Just Once = 1 (N = 14)
- Few Times = 2 (N = 0)
- Many Times = 3 (N = 2)
- 9 = missing data

(Coded – **sshot4**)

Recoded sshot2 into a binary variable, 0 = 0; 1, 2, and 3 = 1

- No = 0 (N = 712)
- Yes = 1 (N= 16)

Threatened with Knife on School Property (Coded – skthreat2)

Have you been threatened with a knife or other sharp object on school property in last 12 months?

- Never = 0 (N = 665)
- Just Once = 1 (N = 42)
- Few Times = 2 (N = 14)
- Many Times = 3 (N = 7)
- 9 = missing data

(Coded – **skthreat4**)

Recoded skthreat2 into a binary variable, 0 = 0; 1, 2, and 3 = 1

- No = 0 (N = 665)
- Yes = 1 (N = 63)

Stabbed with Knife on School Property (Coded – sstab2)

Have you actually been stabbed with a knife or other sharp object on school property in last 12 months?

- Never = 0 (N = 713)
- Just Once = 1 (N = 7)
- Few Times = 2 (N = 5)
- Many Times = 3 (N = 2)
- 9 = missing data

(Coded – **ssstab4**)

Recoded sstab2 into a binary variable, 0 = 0; 1, 2, and 3 = 1

- No = 0 (N = 713)
- Yes = 1 (N = 14)

Beaten or Hit on School Property

(Coded – sbeat2)

Have you been beaten or hit with a bat, board or other such weapon on school property in last 12 months?

- Never = 0 (N = 698)
- Just Once = 1 (N = 18)
- Few Times = 2 (N = 9)
- Many Times = 3 (N = 1)
- 9 = missing data

(Coded – sbeat4)

Recoded sbeat2 into a binary variable, 0 = 0; 1, 2, and 3 = 1

- No = 0 (N = 698)
- Yes = 1 (N = 28)

Threatened with Gun Off School Property (Coded – ngthreat2)

Have you been threatened with a gun, not shot at off school grounds in last 12 months?

- Never = 0 (N = 675)
- Just Once = 1 (N = 38)
- Few Times = 2 (N = 15)
- Many Times = 3 (N = 5)
- 9 = missing data

(Coded – ngthreat4)

Recoded ngthreat2 into a binary variable, 0 = 0; 1, 2, and 3 = 1

- No = 0 (N = 675)
- Yes = 1 (N = 58)

Shot, Not Wounded Off School Property (Coded – nshotat2)

Have you been shot at, but not wounded off school property in the last 12 months?

- Never = 0 (N = 694)
- Just Once = 1 (N = 15)
- Few Times = 2 (N = 12)
- Many Times = 3 (N = 8)
- 9 = missing data

(Coded – **nshotat4**)

Recoded nshotat2 into a binary variable,
0 = 0; 1, 2, and 3 = 1

- No = 0 (N = 694)
- Yes = 1 (N = 35)

Shot off School Property

(Coded – nshot2)

Have you actually been shot off school property in the last 12 months?

- Never = 0 (N = 718)
- Just Once = 1 (N = 4)
- Few Times = 2 (N = 2)
- Many Times = 3 (N = 5)
- 9 = missing data

(Coded – **nshot4**)

Recoded nshot2 into a binary variable,
0 = 0; 1, 2, and 3 = 1

- No = 0 (N = 718)
- Yes = 1 (N = 11)

Threatened With Knife Off School Property (Coded – nkthreat2)

Have you been threatened with knife off school property in the last 12 months?

- Never = 0 (N = 635)
- Just Once = 1 (N = 56)
- Few Times = 2 (N = 27)
- Many Times = 2 (N = 10)
- 9 = missing data

(Coded – **nkthreat4**)

Recoded nkthreat2 into a binary variable,
0 = 0; 1, 2, and 3 = 1

- No = 0 (N = 635)
- Yes = 1 (N = 93)

Stabbed with Knife off School Property (Coded – nstab2)

Have you actually been stabbed with a knife or other sharp object in the last 12 months?

- Never = 0 (N = 707)
- Just Once = 1 (N = 13)
- Few Times = 2 (N = 2)
- Many Times = 3 (N = 3)
- 9 = missing data

(Coded – **nstab4**)

Recoded nstab2 into a binary variable,
0 = 0; 1, 2, and 3 = 1

- No = 0 (N = 707)
- Yes = 1 (N = 18)

Beaten or Hit off School Property

(Coded – nbeat2)

Have you been beaten or hit with a bat, board or other such weapon in the last 12 months?

- Never = 0 (N = 689)
- Just Once = 1 (N = 25)
- Few Times = 2 (N = 9)
- Many Times = 3 (N = 5)
- 9 = missing data

(Coded – nbeat4)

Recoded nbeat2 into a binary variable,
0 = 0; 1, 2, and 3 = 1

- No = 0 (N = 689)
- Yes = 1 (N = 39)

Vicarious Strain Scale

Cronbach's alpha = .581

See Someone Killed by a Weapon

(Coded – seekill2)

During the past 12 months, have you seen someone being seriously wounded or killed by a gun, knife, or other weapon (in real life, not on TV)?

- No, Never = 0 (N = 568)
- Yes, Just Once = 1 (N = 97)
- Yes, A Few Times = 2 (N = 54)
- Yes, Many Times = 3 (N = 14)
- 9 = missing data

(Coded – seekill3)

Recoded seekill2 into a binary variable,
0 = 0; 1, 2, and 3 = 1

- No = 0 (N = 568)
- Yes = 1 (N = 165)

Family Member Been Attacked with Gun (Coded – famattac2)

During the past 12 months, have any members of your immediate family been attacked by someone with a gun?

- No = 0 (N = 699)
- Yes = 1 (N = 34)
- 9 = missing data

Family Member Convicted of Felony (Coded – famconvi)

Have any members of your immediate family ever been convicted of a felony?

- No = 0 (N = 650)
- Yes = 1 (N = 83)
- 9 = missing data

Friends Been Attacked with Guns (Coded – frattac2)

In the past 12 months have any of your friends been attacked by someone with gun?

- None = 0 (N = 556)
- One = 1 (N = 0)
- Few = 2 (N = 159)
- Many = 3 (N = 8)
- 9 = missing data

(Coded – frattac3)

Recoded frattac2 into a binary variable, 0 = 0; 1, 2, and 3 = 1

- No = 0 (N = 556)
- Yes = 1 (N = 167)

Person Shot or Stabbed in Neighborhood (Coded – nshotsta2)

In the past 12 months, has anyone been shot or stabbed in your neighborhood?

- No = 0 (N = 561)
- One Incident = 1 (N = 97)
- More Than One Incident = 2 (N = 63)
- 9 = missing data

(Coded – nshotat3)

Recoded nshotat2 into a binary variable,
0 = 0; 1 and 2 = 1

- No = 0 (N = 561)
- Yes = 1 (N = 160)

Person Shot or Stabbed on School Ground (Coded – stushoot2)

In the past 12 months, has anyone been shot or stabbed on school grounds?

- Never = 0 (N = 646)
- Rarely = 1 (N = 69)
- Sometimes = 2 (N = 10)
- Often = 3 (N = 2)
- 9 = missing data

(Coded – stushoot3)

Recoded stushoot2 into a binary variable,
0 = 0; 1, 2, and 3 = 1

- No = 0 (N = 646)
- Yes = 1 (N = 81)

Anticipated Strain Scale

Cronbach's alpha = .715

Please indicate how likely you think each could happen to you:

Shot with Gun by Age 25

(Coded – beshot2)

By the time I am 25, I will have been shot with a gun.

- Very Unlikely = 0 (N = 532)
- Not Too Likely = 1 (N = 147)
- Somewhat Likely = 2 (N = 40)
- Very Likely = 3 (N = 13)
- 9 = missing data

(Coded – **beshot4**)

Recoded beshot2 into a binary variable,
0 = 0; 1, 2, and 3 = 1

- No = 0 (N = 532)
- Yes = 1 (N = 200)

Stabbed with Knife by Age 25

(Coded – bestab2)

By the time I am 25, I will have been stabbed with a knife.

- Very Unlikely = 0 (N = 547)
- Not Too Likely = 1 (N = 137)
- Somewhat Likely = 2 (N = 35)
- Very Likely = 3 (N = 13)
- 9 = missing data

(Coded – **bestab4**)

Recoded bestab2 into a binary variable,
0 = 0; 1, 2, and 3 = 1

- No = 0 (N = 547)
- Yes = 1 (N = 185)

Dead by Age 25

(Coded – bedead2)

By the time I am 25, I will no longer be alive.

- Very Unlikely = 0 (N = 607)
- Not Too Likely = 1 (N = 95)
- Somewhat Likely = 2 (N = 17)
- Very Likely = 3 (N = 10)
- 9 = missing data

(Coded – **bedead4**)

Recoded bedead2 into a binary variable,
0 = 0; 1, 2, and 3 = 1

- No = 0 (N = 607)
- Yes = 1 (N = 122)

Afraid of Neighborhood Violence

(Coded – **nafraid2**)

Are you personally ever afraid of violence in your neighborhood?

- Never = 0 (N = 383)
- Rarely = 1 (N = 225)
- Sometimes = 2 (N = 103)
- Often = 3 (N = 19)
- 9 = missing data

(Coded – **nafraid4**)

Recoded **nafraid2** into a binary variable,
0 = 0 and 1; 2 and 3 = 1

- No = 0 (N = 608)
- Yes = 1 (N = 122)

Afraid of Violence in School

(Coded – **safraid2**)

Are you personally afraid of violence in school?

- Never = 0 (N = 729)
- Rarely = 1 (N = 0)
- Sometimes = 2 (N = 1)
- Often = 3 (N = 2)
- 9 = missing data

(Coded – **safraid5**)

Recoded **safraid2** into a binary variable,
0 = 0 and 1; 2 and 3 = 1

- No = 0 (N = 729)
- Yes = 1 (N = 3)

Neighborhood Strain Scale

Cronbach's alpha = .800

Juveniles were asked how much each of the following neighborhood problems were a problem for their neighborhood:

Drug Addicts

(Coded – naddicts2)

- Not Very Serious = 0 (N = 510)
- Somewhat Serious = 1 (N = 154)
- Very Serious = 2 (N = 44)
- 9 = missing data

(Coded – **naddicts3**)

Recoded naddicts2 into a binary variable,
0 = 0; 1 and 2 = 1

- No = 0 (N = 510)
- Yes = 1 (N = 198)

Drug Sellers

(Coded – nsellers2)

- Not Very Serious = 0 (N = 512)
- Somewhat Serious = 1 (N = 152)
- Very Serious = 2 (N = 41)
- 9 = missing data

(Coded – **nsellers3**)

Recoded nsellers2 into a binary variable,
0 = 0; 1 and 2 = 1

- No = 0 (N = 512)
- Yes = 1 (N = 193)

Gunfire

(Coded – ngunfire2)

- Not Very Serious = 0 (N = 644)
- Somewhat Serious = 1 (N = 48)
- Very Serious = 2 (N = 15)
- 9 = missing data

(Coded – **ngunfire4**)

Recoded ngunfire2 into a binary variable,
0 = 0; 1 and 2 = 1

- No = 0 (N = 644)
- Yes = 1 (N = 63)

Graffiti

(Coded – ngraffiti2)

- Not Very Serious = 0 (N = 501)
- Somewhat Serious = 1 (N = 163)
- Very Serious = 2 (N = 46)
- 9 = missing data

(Coded – **ngraffiti3**)

Recoded ngraffiti2 into a binary variable,
0 = 0; 1 and 2 = 1

- No = 0 (N = 501)
- Yes = 1 (N = 209)

Burglaries

(Coded – nburglar2)

- Not Very Serious = 0 (N = 493)
- Somewhat Serious = 1 (N = 183)
- Very Serious = 2 (N = 28)
- 9 = missing data

(Coded – **nburglar3**)

Recoded nburglar2 into a binary variable,
0 = 0; 1 and 2 = 1

- No = 0 (N = 493)
- Yes = 1 (N = 211)

Muggings

(Coded – nmugging2)

- Not Very Serious = 0 (N = 636)
- Somewhat Serious = 1 (N = 52)
- Very Serious = 2 (N = 9)
- 9 = missing data

(Coded – **nmugging3**)

Recoded nmugging2 into a binary variable,
0 = 0; 1 and 2 = 1

- No = 0 (N = 636)
- Yes = 1 (N = 61)

Abandoned Houses

(Coded – nabhouse2)

- Not Very Serious = 0 (N = 639)
- Somewhat Serious = 1 (N = 48)
- Very Serious = 2 (N = 10)
- 9 = missing data

(Coded – **nabhouse3**)

Recoded nabhouse2 into a binary variable,
0 = 0; 1 and 2 = 1

- No = 0 (N = 639)
- Yes = 1 (N = 58)

Abandoned Cars

(Coded – nabcars2)

- Not Very Serious = 0 (N = 634)
- Somewhat Serious = 1 (N = 56)
- Very Serious = 2 (N = 10)
- 9 = missing data

(Coded – **nabcars3**)

Recoded nabcars2 into a binary variable,
0 = 0; 1 and 2 = 1

- No = 0 (N = 634)
- Yes = 1 (N = 66)

Winos, Drunks

(Coded – ndrunks2)

- Not Very Serious = 0 (N = 530)
- Somewhat Serious = 1 (N = 119)
- Very Serious = 2 (N = 54)
- 9 = missing data

(Coded – ndrunks3)

Recoded ndrunks2 into a binary variable,
0 = 0; 1 and 2 = 1

- No = 0 (N = 530)
- Yes = 1 (N = 173)

Control Variables

Juvenile Age

(Coded – age5)

Adolescent asked, “How old are you?”

- Age 15 = 15
- Age 16 = 16
- Age 17 = 17
- Age 18 = 18
- Age 19 = 19
- Age 20-21 = re-coded to missing data

Family Living Arrangements

Adolescent asked, “What adults are you living with now?”

Mother

(Coded – mother2)

- No = 0 (N = 87)
- Yes = 1 (N = 645)
- 9 = missing data

Father

(Coded – father2)

- No = 0 (N = 225)
- Yes = 1 (N = 507)
- 9 = missing data

Living with Parents

(Coded – **bio 2**)

Binary variable created to assess whether juvenile live with both biological parents.

- Living with one or neither biological parents = 0 (N = 277)
- Living with both biological parents = 1 (N = 455)
- 9 = missing data

Racial Categories

Adolescent asked, “Which of the following best describes the racial or ethnic group you belong to?”

Juvenile’s Race (Coded – race2)

- White 1 = 1 (N = 509)
- Black 2 = 2 (N = 51)
- Hispanic 3 = 3 (N = 117)
- Asian 4 = 4 (N = 23)
- American Indian 5 = 5 (N = 7)
- Other 6 = 6 (N = 22)
- 0 = missing data

White (Coded – **white**)

- White 1 = 1 (N = 509)
- Any other race 0 = 0 (N = 220)

Black (Coded – **black**)

- Black 1 = 1 (N = 51)
- Any other race 0 = 0 (N = 678)

Hispanic (Coded – **hispanic**)

- Hispanic 1 = 1 (N = 117)
- Any other race 0 = 0 (N = 612)

Other Races (Coded – **other races**)

- Asian, American Indian, and Other
1 = 1 (N = 52)
- Black, White, or Hispanic
0 = 0 (N = 677)