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Structural Inequality in School Discipline: Regulating Intolerance in Public Schools

DISSERTATION

submitted in partial satisfaction of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

in Criminology, Law and Society

by

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2017

DEDICATION

To Lars, Bianca, and Lainey.

Look into my eyes
You will see
What you mean to me
Search your heart, search your soul
And when you find me there, you'll search no more

Don't tell me it's not worth tryin' for
You can't tell me it's not worth dyin' for
You know it's true
Everything I do, I do it for you

– Adams, B., Kamen, M., & Lange, R. J. (1991, June 18). (Everything I do) I do it for you [Recorded by Bryan Adams]. On *Robin Hood: Prince of Thieves* [CD]. London, England: Robert "Mutt" Lange. (March 1991).

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"Schools and Neighborhood Crime: The Effects of Dropouts, Graduates, and Test Scores on Youth Crime." (Gerlinger, Julie, and John R. Hipp). Under Review.

"The Legal Diffusion of Substance Abuse Standards for Schools." (Wakefield, Sara, Julie Gerlinger, Thurston Domina, Christopher Carpenter, and Tim Bruckner). Under Review.

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ABSTRACT OF THE DISSERTATION

Structural Inequality in School Discipline:
Regulating Intolerance in Public Schools

By

Julie Gerlinger

Doctor of Philosophy in Criminology, Law and Society

University of California, Irvine, 2017

Professor John R. Hipp, Chair

This dissertation addresses several important gaps in the literature on school discipline to gain a better understanding of how the school contributes to disciplinary outcomes. I focus on school rather than individual differences (suggesting contextual importance) and apply neighborhood and conflict theories to school discipline (shedding light on race and class differences). Using southern California as a research site, this project analyzes the contextual effects of exclusionary discipline in three complementary studies: 1) an examination of school and neighborhood influences on exclusionary discipline, 2) a macro-level analysis of the school-to-prison pipeline, and 3) a study that examines whether exclusionary discipline improves school safety. In each study, I incorporate "nontraditional" schools (i.e., continuation, alternative, opportunity, etc.) – an often-ignored subgroup of students – to better understand how these same processes unfold in schools with at-risk, highly stigmatized students.

More specifically, the first study assesses how the school and the surrounding neighborhood influence exclusion rates and create a more punitive environment for students. I frame this chapter using racial threat and social reproduction to better understand how school and neighborhood contexts combine to punish poor and minority students and maintain social and

economic inequalities. The second study tests the school-to-prison pipeline hypothesis that an unintended consequence of current school safety and discipline practices is increased crime. Guided by social disorganization and routine activity theories, I analyze how suspensions and expulsions impact neighborhood crime. Finally, the third study examines whether or not the use of punitive discipline actually improves school safety by reducing crime. I use longitudinal school discipline and crime data for the largest school district in California to address this question.

INTRODUCTION

In October of 1994, President Bill Clinton signed the Gun Free Schools Act (GFSA) as part his administration's major campaign to reform education. Under the GFSA, each state receiving federal funds under the Elementary and Secondary Education Act of 1965 must have a law in effect requiring the automatic expulsion of at least one year for any student who is determined to have brought a firearm or explosive device to school. The chief administering officers of the local educational agency (LEA) reserve the right to modify the expulsion on a case-by-case basis, and state regulations must comply with the Individuals with Disabilities Education Act. While the federal order only required expulsion for firearms and explosive devices, state legislators used more inclusive definitions of "weapon" in their statutes. Using financial support as an incentive, the GFSA served as a catalyst for state adoptions of zero tolerance policies. State and local policymakers, mimicking mandatory sentencing drug laws, implemented automatic exclusion laws for a host of school infractions beyond firearms and explosives. A major consequence of these actions is over 3.5 million students temporarily and permanently excluded from public education each year (U.S. Department of Education, 2016), decreasing their chances of completing high school and increasing their likelihood of future arrest.

This dissertation addresses several important gaps in the literature on school discipline to gain a better understanding of how the school – not individual students – contributes to disciplinary outcomes. Using southern California as a research site, this project analyzes the contextual effects of exclusionary discipline in three complementary studies: 1) an examination of school and neighborhood influences on exclusionary discipline, 2) a macro-level analysis of

the school-to-prison pipeline, and 3) a study that examines whether exclusionary discipline improves school safety. I focus on school rather than individual differences (suggesting contextual importance) and apply neighborhood and conflict theories to school discipline (shedding light on race and class differences). I test the school-to-prison pipeline hypothesis that an unintended consequence of current school safety and discipline practices is increased crime. Finally, I assess whether or not the use of punitive discipline actually improves school safety by reducing crime. In each chapter, I incorporate nontraditional (i.e., continuation, alternative, opportunity, etc.) schools – an often-ignored subgroup of students –to better understand how these same processes unfold in schools with at-risk, highly stigmatized students.

In the next sections, I describe the unique political climate and social conditions that were essential for major penal shifts in school discipline to take place, followed by a brief discussion of the collateral consequences of the criminalization movement.

School Criminalization

Youth Violence in the United States, 1990s

The youth violent crime rate peaked at an all-time high in 1994. Since then, the trend has (mostly) continued to decline,[1] but only after instilling a national fear of juveniles. Between 1980 and 1994, juvenile arrests for violent crime grew 64 percent (Butts and Travis, 2002). Juvenile arrests for murder grew nearly 100 percent, and even more significantly (167 percent) from 1984 to 1993. Youth "superpredators" – described as those with little to no remorse or respect for human life – were considered a "new breed" of violent offenders (DiIulio, 1995). Two other prominent scholars, James Q. Wilson (1995) and James Alan Fox (1996), helped to

[1] Murder, forcible rape, robbery, and aggravated assault rates have declined over the last three decades, but there was a slight increase in the youth violent crime trend from about 2003 to 2008 (Butts, 2013).

perpetuate this myth of superpredators with their foreboding reports of increasing juvenile violence. Fortunately, their premonitions of teenage "bloodbaths" did not ensue after the mid-90s crime decline, but the fear of youth remained. More on this fear, and the resulting criminalization of youth, is explained below.

Student Victimization and a Growing Fear of Crime, 1990s to Present

Serious violent incidents in schools are a rare occurrence. In fact, school is one of the safest locations for youth, as students have a less than one percent chance of being seriously injured at school (Robers, Kemp, Truman, & Snyder, 2013). Based on data from the National Crime Victimization Survey School Crime Supplement – a nationally representative sample of students ages 12 to 18 – violent and property crime victimization at school has declined over the last three decades. These trends in school are remarkably similar to the youth crime trends that occurred outside of school. Whereas only two percent of students ages 12 to 18 reported being the victim of a violent crime at school in 1989, the proportion of students reporting violent victimization by 2011 was cut in half (Bureau of Justice Statistics, 1989, 2011). Property victimization also dropped from about six percent to two percent. As noted by Cook, Gottfredson, and Na (2010), the problem with crediting the school criminalization movement with the school crime decline is that youth victimization rates were declining outside of schools as fast or faster than in the schools.

Amid assertions that rampant school violence necessitated zero tolerance, critics of these policies claim media depictions of isolated school incidents have contributed to a generalized perception that schools are unsafe (Maguire, Weatherby, & Mathers, 2002). To use the most widely-cited example – the 1999 mass school shooting by two high school seniors in

Columbine, Colorado – the media likened the tragic event to an act of terrorism (a national security concern) and subsequently introduced an element of danger in public schools (Altheide, 2009). Empirical evaluations of school safety consistently find that serious school violence is infrequent (Zhang, Musu-Gillete, & Oudekerk, 2016), and the perception of schools as dangerous places is unmerited. Despite this, fear of school violence continues to increase support for tighter school rules and more intense security measures (see Shah & Ujifusa, 2013).

Widespread Media Attention

Extremely violent school incidents garner national media attention for a couple reasons. First, schools are still expected to be safe places for children, and serious school incidents challenge that notion. Second, when the victims of serious incidents are children, the role of the "innocent victim" is accentuated; these victims could be anyone's kid. The occurrence at Sandy Hook Elementary School in December 2012, for example, shook the nation much like the Columbine High School shooting did over a decade earlier. For weeks, every major news organization covered the fatal shooting of 20 elementary students in Newtown, Connecticut. Parents, educators, and policymakers alike became understandably concerned over their children's safety. Frequent reporting on the incident by news outlets generated a fear that these occurrences are likely to repeat. Columbine – and later, Sandy Hook – is frequently cited as a catalyst for security measures (Addington, 2009, 2014), school safety (Muschert & Peguero, 2010), and zero tolerance policy adoption (Snell, Bailey, Corona, & Mebane, 2002). However, in an analysis of school safety legislative enactments before and after Columbine, Birkland and Lawrence (2009) found that policy responses to the incident were limited and unfocused. Moreover, policies prohibiting weapon possession or fighting were already in effect pre-

Columbine. Therefore, these isolated incidents were more likely to stir up existing fears than create new ones.

Criminalization of Youth and Schools

The escalating youth involvement in violent and drug crimes from the 1980s to mid-90s, paired with a barrage of media coverage, resulted in the criminalization of youth. Juveniles who committed serious offenses were viewed and treated as adults. Judicial waiver laws (legislation that allows judges to transfer youth offenders to criminal court for certain cases), statutory exclusions (state statutes that exclude certain juveniles offenders from juvenile court jurisdiction),[2] and concurrent jurisdiction (the prosecutor may decide whether to file certain cases in criminal, rather than juvenile, court)[3] allow for the transfer from juvenile jurisdiction to adult court. By 1999, the vast majority of states had judicial waiver laws (46 discretionary, 16 presumptive, and 15 mandatory), 29 states had a statutory exclusion provision, and 15 states had a concurrent jurisdiction provision (Sickmund, 2003). While the transfer of juveniles to adult court is not a new phenomenon,[4] it gained popularity in the states in the 1990s. Every state (except Nebraska) and the District of Columbia either adopted or expanded its juvenile waiver provision between 1992 and 1999 (Sickmund, 2003). The increase in transfer laws for juveniles occurred at the same time that strict sentencing and corrections policies for adults were gaining momentum.

Youth were being treated less like minors and more like adults in institutions beyond the criminal justice system (Hirschfield & Celinska, 2011; Reyes, 2006). In his influential book, *Governing Through Crime*, Jonathan Simon (2007) explains how schools prioritized a security

[2] Also known as a legislative exclusion.
[3] Also known as a prosecutorial waiver, prosecutor discretion, or direct file.
[4] Some states had juvenile transfer laws since before the 1920s (Sickmund, 2003).

response to crime, thereby filling learning institutions with technosecurity apparatuses (e.g., metal detectors, security cameras, drug tests, and locker searches) and zero tolerance policies.

> The right to go to school in a safe environment has been transformed from a set of expectations for administrators to a zero-sum game between aggressors who are criminals or criminals in the making, and their victims – a shifting group consisting of everyone not stigmatized already as criminal. (Simon, 2007, p. 222)

Despite decreasing national crime trends, crime was viewed as a central problem for schools, and crime prevention became a discernible focus. Simon posits that schools have taken this position in part due to pressures from above (e.g., federal incentives), and in part at the urging of concerned parents. Post segregation, equal access to education was one way in which the federal government sought to reverse blatant racial discrimination. The perception that desegregation meant their children would have to attend dangerous schools pushed parents to resist these education-based remedies. Parents declared their concerns over school safety as primary issues of the school, thereby advocating the school criminalization agenda.

Security Measures

Much of the research on school criminalization focuses on security procedures, particularly physical measures, implemented in schools that have prison-like qualities. While the purpose of these security measures is to protect (and prevent) students from dangerous situations, they have been shown to be intimidating for students. In some cases, even if security measures increase physical safety (Garver & Noguera, 2012), they also result in greater conflict between school personnel and students (Garcia, 2003; Garver & Noguera, 2012). This tradeoff may make sense in the context of solid evidence of efficacy, yet research on these security measures is mixed. Schreck, Miller, and Gibson (2003), for example, found that additional

security measures produced no increased safety benefits. In their study on victimization among middle and high school students, they reported that the presence of these measures (i.e., guards, metal detectors, locked doors, supervision in the hallway,) failed to reduce the likelihood of both theft and violent victimization. Moreover, security measures compromise psychological safety as they increase students' fears and anxieties (Garver & Noguera, 2012; Hankin, Hertz, & Simon, 2011; Juvonen, 2001; Perumean-Chaney & Sutton, 2012). These findings, combined with research on punitive school discipline, show very little evidence that the school criminalization movement has improved school safety (see also American Psychological Association Zero Tolerance Task Force, 2008).

The School-to-Prison Pipeline

In addition to zero tolerance policies and security measures, schools adopted policies and practices that generated a direct line to law enforcement. For some districts and schools, ties to local police became a major resource for problematic student behaviors that used to be dealt with by school administrators. With funding incentives from the federal government, schools also rapidly hired school resource officers (SROs) in an effort to increase school safety. An unsurprising result of this has been increased reporting of weapon and drug offenses (Na & Gottfredson, 2013). Again, offenses that were previously dealt with at school are now under the jurisdiction of SROs and local law enforcement. This criminalization process became known as the school-to-prison pipeline.

Several studies have examined the effect of exclusions on future delinquency and crime. The largest and most comprehensive study to date was conducted in Texas, which followed all seventh graders in the state over a six-year period (Fabelo et al, 2011). An analysis of their

school and juvenile justice records revealed that excluded students, especially those excluded for discretionary violations, were nearly three times more likely to have some contact with the juvenile justice system. Other longitudinal studies have also found a relationship between suspensions and the likelihood of future arrest or incarceration (Mowen & Brent, 2016; Ramey, 2016; Shollenberger, 2015). One study found that social control experienced during childhood – in this case, punitive school discipline and therapy and/or medication – shape social control experiences later in life as well (Ramey, 2016). More specifically, criminalization and medicalization in childhood increases a person's chance of experiencing corrective social control (i.e., contact with the criminal justice system and involvement with the mental health system) in adulthood.

Discipline Disproportionality

Discipline disproportionality refers to the overrepresentation of a group of students in the use of exclusions. It is most commonly applied to the overrepresentation of minority students in the use of suspensions and expulsions, though discipline disparities also exist along class, gender, disability and sexual orientation lines. Black and Hispanic students, males, students from low-income families, students with disabilities, and LGBT youth are all more likely to be excluded from school compared to their peers, despite committing similar infractions (Skiba et al., 2011). There are numerous studies that demonstrate disproportionality at the individual level (for example, see Costenbader & Markson, 1998; Skiba, Meditratta, & Rausch, 2016; Wu, Pink, Crain, & Moles, 1982), and a few studies have also shown that disproportionality is present at the school level. That is, schools with more minority students – particularly black students – are more likely to adopt punitive policies and use exclusionary

discipline over more restorative methods (Ramey, 2015; Rocque & Paternoster, 2011; Welch & Payne, 2010, 2012).

After reviewing the school discipline statutes and regulations over the last 30 years for all 50 states, it became apparent that there is considerable variation in mandatory discipline across local governments. For the most part, state legislators pass the task of designing school discipline policies to local education agencies. Although thought of as "zero tolerance" in the true sense of the phrase, the policies created by LEAs generally permit principals to make autonomous decisions about their schools' discipline policies and the enforcement of such policies. In other words, these policies are not zero tolerance in the same sense as mandatory minimums; principals make most disciplinary decisions on a case-by-case basis. As a result, zero tolerance policies are an interesting counterpoint to similarly punitive policies in the criminal justice system. Mandatory minimums, for example, are notable as much for their punitiveness as for the degree to which they remove decision-making power and discretion from criminal justice actors, such as judges or parole boards. Zero tolerance policies, in contrast, incorporate punitive language and require severe sentences for some "crimes" but allow school actors (in this case, principals) to retain discretion in individual cases. The variation, then, is likely to be found at the school level, and discipline disproportionality is posited to be due, in large part, to administrator discretion.

Exclusionary Discipline and the Academic Achievement Gap

The relationship between school discipline and academic achievement has been well-documented. Students who have been removed from the normal classroom setting because of an exclusion perform worse in school than those who were not, holding all else equal. As explained

by Gregory and colleagues (2010), "Suspended students may become less bonded to school, less invested in school rules and course work, and subsequently, less motivated to achieve academic success" (p. 60). The authors describe strict discipline and the black-white student achievement gap as "two sides of the same coin."[5] Exclusionary sanctions, which disproportionality affect minority students, may remove students from classroom instruction anywhere from one class period to 10 or more days, placing these students academically behind their peers as a result. To examine the effect of suspensions on academic achievement, Arcia (2006) compared two similarly matched groups of students – one group consisting of students who had been suspended at least once in the three-year study period, and the other group with no suspensions. Not only did suspended students have lower scores on the state's reading competency test after the first year, but the difference in reading scores between the two groups increased with the number of days suspended. By the end of the third year, suspended students were performing several grade-levels behind. Another study found significant decreases in both math and reading scores following school suspension (Morris & Perry, 2016).

The connection between suspensions and long-term academic outcomes is also prevalent. A longitudinal study of a 9th-grade cohort (over 180,000 students) in Florida found significant differences between suspended students and non-suspended students in terms of high school graduation, postsecondary enrollment, and the number of postsecondary terms completed (Balfanz, Byrnes, & Hornig Fox, 2015). With each additional suspension – up to 4 or more – the likelihood of graduating high school or enrolling in a postsecondary education declined. Temporary removals from school, therefore, have both short- and long-term consequences for student achievement and are at least partially responsible for the achievement gap.

[5] For an historical overview of the achievement gap and its relationship to accountability policies, see Harris & Herrington, 2006.

There are also important school-level contributions to discipline disproportionality and lowered academic achievement. Skiba and Rausch (2004), for instance, found that poverty, out-of-school suspension, and the proportion of African American students all negatively predicted the percent of students who passed both the math and English/language arts sections of the state test, and this was true for both elementary and secondary schools. Morris and Perry (2016) reported that black students are more likely than their white peers to attend schools that employ higher levels of exclusionary discipline and are more likely to be suspended, which in turn contributes to the achievement gap. School-level characteristics have even been found to be stronger predictors of racial disparities in exclusionary discipline than individual-level characteristics (Skiba et al., 2014). Some scholars suggest an authoritative school environment – firm disciplinary structure paired with supportive relationships – might explain some of the variance found at the school level. This method is based on authoritative parenting styles that have been shown to improve youth behavior and academic achievement (Steinberg, Lamborn, Dornbusch, & Darling, 1992) and lower undesirable behaviors (Suldo & Huebner, 2004), regardless of the family's race/ethnicity or income. In the school setting, and specifically in relation to racial disparities in school discipline, supportive school climates with high academic expectations of students have been shown to decrease the suspension rates for both black and white students, as well as the suspension gap between the two (Gregory, Cornell, & Fan, 2011).

A notable recent study found that it is not just the removed student that suffers from a criminalization culture. Influenced by the literature on collateral consequences associated with mass incarceration, including the devastation caused to families and communities of the incarcerated, Perry and Morris (2014) sought to explore the effects of heightened social control imposed on students. Using a sample of middle and high school students in a large, urban public

school district in Kentucky, they estimate the indirect effects of out-of-school suspensions on academic achievement (i.e., state standardized reading and math scores) over time for non-suspended students. High levels of suspension in the school have an adverse negative impact on both reading and math achievement for non-suspended students in all schools, but especially in organized and nonviolent environments. As noted by the authors, these results clearly contradict the rationale for maintaining punitive school discipline.

The research on punitive responses to student misconduct has unfailingly shown that exclusionary discipline reduces academic achievement and increases delinquent and/or criminal behaviors. Because the disparities in discipline are often along racial or class lines, these policies inadvertently reproduce a stratified society, whereby minorities and the underclass experience a lifetime of disadvantage. Moreover, the criminalization of students indirectly inhibits the academic achievement of those who were simply bystanders in a culture of control.

Alternative Education Programs

There are generally two types of alternative programs: one for gifted students and one for dysfunctional students. Those placed in the latter group are the most at risk for permanent exclusion and dropping out. Students excluded from traditional schooling are often placed in alternative programs during their exclusion period or in lieu of traditional schooling altogether. Once lauded as a suitable placement for students who could not function in traditional education settings – often due to attendance or behavioral issues – alternative education programs are now known as last chance programs for failing students (Kelly, 1993). As Arnove & Strout (1980) point out, "Alternative schools, unfortunately, are often perceived as 'dumping grounds,' 'warehouses,' or 'compounds' for every conceivable type of social misfit and academically

incompetent youth. They are widely viewed as the type of school where nice people and bright students do not go" (p. 462). Seyaki (2001) describes how students in an alternative program felt strongly that these schools did not challenge them academically, nor did they prepare students for higher learning or preferable job placements. These themes are echoed in other studies, as well (see Arnove & Strout, 1980; Brown, 2007; Kim & Taylor, 2008).

Research on school discipline often overlooks students in nontraditional schools, perhaps because they are viewed as beyond help by the time they get there. As Brown (2007) suggests, the perception that these students, with histories of academic failure and truancy, do not want to learn may be one reason for limited research in this area. Additionally, efforts to improve educational conditions for low-achieving students are focused on conventional institutions; the needs of students in alternative programs have been effectively forgotten (Munoz, 2005). The first national study on public alternative schools and programs reported that there were nearly 11,000 public alternative schools and programs for at-risk youths (1.3 percent of the total student population) during the 2000-01 school year (National Center for Education Statistics, 2002). The report also found that alternative programs tended to be in districts with high minority student enrollments and high poverty concentrations. In a recent dissertation, Vanderhaar (2010) analyses alternative school placements of an entire third grade cohort through grade 12. She found that out-of-school suspension was the most significant predictor of placement, and over of a third of the students in alternative programs experienced a subsequent juvenile detention. Thus, alternative programs have been referred to as "feeders into the school-to-prison pipeline" (Reyes, 2006) due to the concentration of at-risk, poor, and minority students, as well as the commonly observed lack of adequate resources, low expectations, and limited preparation for the future.

Summary

Youth spend a substantial portion of their day under the direct supervision of adults while in school. School-oriented social control helps adolescents by shaping their values and social norms and teaching civic-minded behaviors, especially if these practices are absent in the home (Welsh, Greene, & Jenkins, 1999). In the criminalization era, instances often referred to as "teachable moments" are now met with strict punishment and removal from the classroom and/or school. Students who are excluded from the daily operations of school miss fundamental lessons that set youth up for a more successful future.

As noted above, myriad studies examine discipline disproportionality by race, gender, and the interaction of the two (Fenning & Rose, 2007; Finn & Servoss, 2012; Gordon, Piana, & Keleher, 2000; Lee, Cornell, Gregory, & Fan, 2011; Lewin, 2012; Raffaele Mendez & Knoff, 2003; Skiba et al., 2014). There is also significant variation by already at-risk and vulnerable students, such as those with disabilities and LGBT youth (Brownstein, 2010; Carter, Fine, & Russel, 2014; Fabelo et al., 2011; Himmelstein & Brückner, 2011; Losen & Gillespie, 2012). The biases that influence discipline disproportionality by race are present in schools attended by minority and underprivileged youth. Education is highly correlated with future economic success (Bureau of Labor Statistics, 2014; Duncan & Murnane, 2011; Goldin & Katz, 2008; Mincer, 1974; Porter, 2014; Sewell & Hauser, 1975; U.S. Department of Education, 2014), and zero tolerance policies obstruct this path for those who are already at a disadvantage (American Civil Liberties Union, 2008; American Psychological Association Zero Tolerance Task Force, 2008; Costenbader & Markson, 1998; Skiba & Peterson, 1999). In this way, zero tolerance policies effectively preserve social inequalities among those excluded rather than produce positive changes in behavior.

Scholars suggest that school discipline is merely another mechanism that unequally chastises minority groups compared to their white counterparts. The criminalization of school – and in particular, black and Hispanic students – parallels the racial disparities evident in the criminal justice system. Instead of correcting antisocial behaviors into positive changes, both school exclusions and the criminal justice system respond to misconduct by removing youth from traditional social settings and placing them in confinement.

The public school system is failing our youth. Equal opportunity to an education does not provide equal experiences or outcomes, as schools are increasingly segregated (Bankston & Caldas, 1996; Kucsera, Siegel-Hawley, & Orfield, 2014; Orfield, Bachmeier, James, & Eitle, 1997), and the achievement gap between white and black students is ever-present (Magnuson & Waldfogel, 2008). Changes to the socioeconomic achievement gap – that is, differences in academic achievement and educational attainment among children of low versus high socioeconomic families – over the last 50 years have also widened concurrently with the income gap (Reardon, 2011). Still, the true difference between white and black student academic achievement is likely hidden by excluding struggling students from the equation altogether. The proliferation of zero tolerance policies and exclusionary discipline perpetuates and reinforces disparities in educational and occupational attainment by removing minority students from school and denying them the opportunities afforded to their white and more affluent peers. As education is an imperative path to future success, inequality rooted in school discipline is likely to spread into other important domains.

This dissertation focuses on how schools contribute to discipline disproportionality and local crime. Unlike most studies, I include alternative education schools in additional to traditional secondary schools to examine how the criminalization process affects the most at-

risk and stigmatized groups of students. In Chapter One, I assess how the school and the school's neighborhood influence exclusion rates and create a more punitive environment for students. I frame this chapter using racial threat and social reproduction to better understand how school and neighborhood contexts combine to punish poor and minority students and maintain social and economic inequalities. Chapter Two approaches the school-to-prison pipeline argument using a macro-level analysis of secondary schools. More specifically, guided by social disorganization and routine activity theories, I analyze how suspensions and expulsions impact neighborhood crime. Chapter Three asks a straightforward research question that has been debated for decades: Do disciplinary exclusions improve school safety? I use longitudinal school discipline and crime data for a large school district in California to address this question. Finally, Chapter Four discusses the general findings and policy implications from the previous chapters and offers directions for future research.

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CHAPTER ONE

School and Neighborhood Influences on Exclusionary Discipline

This study assesses whether school and neighborhood racial/ethnic composition and disadvantage influence school disciplinary practices. At present date, only a handful of studies have analyzed the direct relationship between neighborhood characteristics and school discipline outcomes. There is evidence that schools are reflective of their surrounding neighborhoods in terms of student population and resources (Laub & Lauritsen, 1998; Menacker, Hurwitz & Weldon, 1990; Vartanian & Gleason, 1999), but this has not yet been applied to school discipline in a rigorous way. I investigate the contextual importance of varying school and neighborhood demographics on school discipline using two theories – social reproduction and racial threat– to guide this research. Although the negative consequences associated with exclusionary discipline (i.e., suspension and expulsion) have been well-documented in a variety of research settings, it is still unclear whether or not students in disadvantaged schools – defined by the student population, the school neighborhood, or both – are more likely to be excluded. If punitive discipline is concentrated in disadvantaged neighborhoods, they help to reproduce social inequality in areas with the most at-risk youths.

Zero tolerance policies require the removal of students from the classroom or the school for certain violations. Like some criminal justice policies, they operate under the assumption that strict and severe punishments will deter students from violating set rules, and that the removal of rule-breakers from the traditional classroom setting will result in a safer, less-disruptive learning environment. Also like some criminal justice policies, there is an abundance of research that demonstrates the unintended consequences of such practices – among them, lowered academic performance, dropping out, increased delinquency, and contact with the juvenile justice system are all associated with overly punitive and rigid discipline policies.

These policies also disproportionately affect minority and low SES students (Brooks, Schiraldi, & Ziedenberg, 1999; Kupchik & Ward, 2013; Welch & Payne, 2010, 2012), though it remains unclear whether or not these policies actually reduce or prevent school disorder (G. D. Gottfredson & D. Gottfredson, 2001; Wang, Selman, Dishion, & Stormshak, 2010; Welsh, 2000, 2001). One recent study found that the black-white achievement gap is explained, in part, by the disproportionate use of suspensions (Morris & Perry, 2016), while another found that non-suspended students in high exclusion schools also experience lowered school performance (Perry & Morris, 2014). Hence, the collateral consequences of these policies and practices often outweigh the benefits.

Much of the research on school discipline has focused on individual-level demographic characteristics and their relationship to the likelihood of exclusionary discipline, including but not limited to gender, race, and class. School exclusions have been shown to disproportionately affect black and Hispanic students, males, students with disabilities, and LGBT youth. Black and Hispanic students, for example, are anywhere from two to six times more likely to be suspended or expelled as compared to their white counterparts (American Psychological Association Zero Tolerance Task Force, 2008; Brooks et al., 1999; Costenbader & Markson, 1998; Morris & Perry, 2016; Raffaele Mendez & Knoff, 2003; Skiba, Horner, Chung, Rausch, May, & Tobin, 2011; Wu, Pink, Crain, & Moles, 1982). Students with disabilities – particularly those with emotional disturbances and learning disabilities – are nearly three times more likely to receive an out-of-school suspension compared to students without disabilities (Fabelo et al., 2011). Fabelo et al. (2011) found that ten percent of excluded students between grades 7 and 12

dropped out.[6] Thus, students who are already at risk for dropping out are disproportionately subjected to these policies and pushed out of the education system.

There are fewer studies that analyze the school differences that contribute to discipline disproportionality. Recent work on the racial/ethnic composition of the school finds that schools with a higher percentage of black students are significantly more likely to refer students to the principal's office (Rocque, 2010; Rocque & Paternoster, 2011), have zero tolerance policies, and use punitive disciplinary responses (Payne & Welch, 2010; Ramey, 2015; Welch & Payne, 2010, 2012). This finding is consistent even when controlling for poverty, principal and administrative characteristics, delinquency, and urbanicity. Race, therefore, is a significant predictor of harsh discipline at the individual and school level.

Aside from the obvious social and economic benefits of completing high school, school is a crucial context for adolescent development and is an important form of social control. Attachment to school, and to adults other than parents, serves as a protective factor against a variety of risky behaviors, including emotional distress, suicidality, violence, crime, drug and alcohol use, and gang membership (Catalano, Haggerty, Oesterle, Fleming, & Hawkins, 2004; Resnick et al., 1997). A significant portion of the day is spent under the direct supervision of adults in classrooms and on school grounds, but more importantly, school bonding creates an informal control that prevents behaviors that are not conducive to success in school. Schools that promote positive norms are more likely to produce positive outcomes for students and reduce problem behaviors (Catalano et al., 2004). Exclusionary discipline, therefore, derails students from a path to academic success, eliminates fundamental social bonding and positive developmental experiences, and creates opportunities to offend.

[6] For more research on the positive effect of exclusive discipline on dropping out, see Balfanz, Byrnes, & Hornig Fox, 2015; Lee et al., 2011; and Vallejo, 1987.

The School-to-Prison Pipeline

This process of funneling students from school to the criminal justice system is known as the school-to-prison pipeline. It draws on parallels between the juvenile justice system and school discipline to explain how students are criminalized at school for behaviors that were previously dealt with by school administrators (Hirschfield, 2008; Hirschfield & Celinska, 2011). Noted historian Heather Ann Thompson (2013) describes these innovations in school discipline primarily as a shift in how schools characterize and respond to typical adolescent behaviors:

> Even though America's school-aged children had since time immemorial engaged in fights, been disrespectful to teachers, skipped classes, bullied one another, and engaged in acts of vandalism as well as other inappropriate behaviors, in the late-1960s school systems began employing security staffs in order to deal with such student conduct far more aggressively and punitively. (p. 25)

The get-tough approach to juvenile offenders is mirrored in school discipline. For example, juvenile waiver laws – laws permitting the transfer of juvenile cases to adult courts for serious or violent offenses – were passed in most states in the 1990s, the same time period that zero tolerance policies (with referrals to law enforcement clauses) became commonplace. Despite the drop in juvenile crime in the second half of the 1990s, the number of incarcerated juvenile offenders increased, including those charged with nonviolent offenses (Wald & Losen, 2003). In both school discipline and the criminal justice system, minority youth are heavily overrepresented (Hirschfield, 2010; Rios, 2006).

The concept of criminalization, as applied to schools, is both part of the larger literature on criminalization – the development of criminal law to enforce social control (Jenness, 2004)– and distinct in its own right. Hirschfield and Celinska (2011) thoughtfully discuss the ways in which criminalization has been applied to school safety and discipline research. Some scholars

characterize criminalization as criminal sanctions for school violations (Theriot, 2009), while a more liberal definition might include prison-like school environments (Hirschfield, 2008; Reyes, 2006; Simmons, 2009) or strict discipline codes. As Hirschfield and Celinska (2011) note, school criminalization scholars have applied this term to both "policies and practices that sanction student conduct *as* crime [and] those that merely *associate* students and their problems with crime" (p. 2). Examples of sanctioning student misconduct as criminal behavior include referrals to law enforcement and the courts, while associating students with crime refers to the prison-like qualities of in-school suspensions and ramped security. In the get-tough school era, students are treated as criminals and consequently punished as criminals.

While relatively few studies have actually documented the so-called school-to-prison pipeline using longitudinal data, the findings from these studies are consistent. In one of the largest and most comprehensive studies to date, Fabelo and colleagues (2011) examine longitudinal individual school records and school campus data for all seventh-grade public school students in the state of Texas. They also access the state juvenile justice database to understand how school discipline might have contributed to juvenile records. In addition to other important findings, this study found that, after controlling for over 80 individual and school characteristics, students who were suspended or expelled for a discretionary violation – not one mandated by state law – were nearly three times more likely to be in contact with the juvenile justice system the following year.

Other studies have found a link between punitive school discipline and juvenile or adult criminal records using multiple waves of the National Longitudinal Survey of Youth, 1979 and 1997 cohorts, to assess whether suspensions increase the likelihood of future arrest. The results show that the risk of arrest or incarceration are highly stratified by suspension experience

(Mowen & Brent, 2016; Ramey, 2016; Shollenberger, 2015). That is, there is an increasing risk of arrest and confinement of any type as the number of suspensions increases (Mowen & Brent, 2016; Shollenberger, 2015).[7] This risk is, as expected, higher for boys than girls and higher for black youths than white and Hispanic youths. In an assessment of student-reported delinquent and criminal behaviors, Shollenberger also finds that (1) among youth suspended early on (by age 13), white boys were more likely to report delinquency than black or Hispanic boys, and (2) a large percentage of boys who were suspended never reported any delinquent behaviors (21% of suspended white boys, 35% of suspended black boys, and 42% of suspended Hispanic boys). Ramey (2016) examines how social control experiences during childhood – namely, punitive school discipline and therapy and/or medication – shape social control experiences during later stages of the life course (i.e., contact with the criminal justice system and involvement with the mental health system). He finds that both criminalization and medicalization to treat problem behaviors in childhood increase chances of experiencing corrective social control – within the respected areas but not across – in adulthood. In summary, racialized punitive social control in childhood affects the life course such that early labels, either internalized or institutionally placed, follow the individual through adulthood.

Communities and Schools

Richard Arum (2000) describes the relationship between schools and communities in the *Annual Review of Sociology*, providing historical and current sociological perspectives on the role of local demographic and neighborhood characteristics on school processes. While earlier conceptualizations of this relationship emphasized the local school community as a strong

[7] Confinement is defined as jail, adult correctional facility, juvenile correctional facility, and reform or training school.

influence on educational practice, neoinstitutionalists – those who focus on the way institutions interact with and affect society – reject this notion. Instead, they argue that schools are connected to larger organizational fields, which are made up of institutions tied to the school. Federal, state, and district regulating agencies delegate educational practices, making schools in similar positions (e.g., all public schools) structurally equivalent. As Arum (2000) states:

> If one adopted assumptions of little meaningful school variation, public schools across the United States could be argued to share a common organizational field; if one rejected assumptions of the absence of school variation, the effects of context-specific institutional features of the organizational environment could be examined. (p. 399)

As decades of research have shown neighborhood variations in educational outcomes, including educational resources and attainment, it is clear that both local characteristics play key roles in shaping educational practice.

Several studies have examined neighborhood influences on school conditions and disorder. As part of their seminal project, Gottfredson and Gottfredson (1985) investigated how neighborhood characteristics (e.g., community poverty, unemployment, urbanicity) affected school disorder and violence using school data from the Safe School Study, which includes a national sample of 642 secondary schools. Their findings revealed that neighborhood composition and social disorganization were key determinants of school victimization, though more strongly correlated with teacher reports of victimization than student reports. Community characteristics have even been found to be more influential on high school suspension rates than school characteristics (Hellman & Beaton, 1986). A more recent study found that community-level changes in racial and ethnic heterogeneity – a characteristic of socially disorganized neighborhoods – does not have a direct impact on student offending, but instead moderates the relationship between school-level changes in racial and ethnic heterogeneity and student

delinquency (Boggess, 2013).

Other studies have assessed how the community impacts student academic performance and behaviors such as attendance, grades, trouble avoidance, and dropout rates. Bowen and Bowen (1999) found that exposure to community violence and negative peer cultures decreased school attendance and trouble avoidance and lowered student grades. Using structural equation modeling, another study found that neighborhood social disorganization had both direct and indirect effects (through parenting) on these same educational outcomes, similar to the previous study (Bowen, Bowen, and Ware 2002). Vartanian and Gleason (1999) tested the relationship between neighborhood conditions and educational attainment in high school and college and found that neighborhood social disorganization was negatively correlated with high school education, but only for disadvantaged black youth. Black students from low socioeconomic status families and households in which the head is a high school dropout are much more likely to drop out themselves.

In this chapter, I use social reproduction and racial threat theories to examine structural rather than individual processes that produce discipline disparities. More specifically, I investigate how the racial/ethnic composition and level of disadvantage of both the student population and the surrounding neighborhood influence suspension and expulsion rates. In doing so, I expose potential administrator biases that disproportionately affect some of the most at-risk students, effectively reproducing inequalities that a formal education is intended to eliminate.

Theoretical Framework

Social Reproduction

The concept of social reproduction was first introduced by Karl Marx to explain the labor roles and processes that defined his work on the capitalist mode of production. Conflict theorists have since applied it to other domains of social and economic inequality, including education and responses to crime. Pierre Bourdieu (1996) links education to cultural capital, arguing that the educational system works most effectively for those who have been previously familiarized with art and other cultural practices of the dominant class:

> The educational system reproduces all the more perfectly the structure of the distribution of cultural capital among classes (and sections of a class) in that the culture which it transmits is closer to the dominant culture and that the mode of inculcation to which it has recourse is less removed from the mode of inculcation practiced by the family. (p. 71)

The educational system, according to Bourdieu, fulfills a function of legitimation that creates and recreates social hierarchies based on skills and practices acquired in the educational system. Because these merits are based on the dominant culture and are best understood by those who are part of the dominant culture, the social reproduction of inequality is entrenched in the educational system.

Education is just one of many institutional forces working simultaneously to reproduce inequality. For the urban poor, in particular, there are numerous consequences of concentrated disadvantage – a term that captures the compounded disadvantages that can hinder important social ties, limit access to resources, and expose residents to adverse social conditions. Those who reside in concentrated poverty are susceptible to serious short- and long-term disadvantages, including health problems (Jones & Duncan, 1995), psychological distress, developmental issues (Elliott, Wilson, Huizinga, Sampson, Elliott, & Rankin, 1996; Sampson, Sharkey, & Raudenbush, 2008), low educational attainment (Mazawi, 1999; Yun & Moreno, 2006), low academic achievement (Reardon, 2011), crime and delinquency (Kubrin & Weitzer,

2003; MacDonald & Gover, 2005; Parker, Stults, & Rice, 2005), and recidivism (Kubrin & Stewart, 2006).

In addition to neighborhood effects, there are various social processes that contribute to structural inequality (see Wilson, 1987). Social processes are the mechanisms of society that promote relations among its members. "Examples of social processes that contribute directly to *racial group* [emphasis added] outcomes include laws, policies, and institutional practices that exclude people on the basis of race or ethnicity" (Wilson, 2009, p.5). Some of these processes are more explicit, such as Jim Crow segregation laws, while others are subtler, like school tracking policies – supposedly based on merit – that reproduce segregation. In their book, *American Apartheid: Segregation and the Making of an Underclass,* Massey and Denton (1993) demonstrate how the systematic segregation of African Americans created a persistent underclass of black communities. School discipline policies are a form of implicit institutional practice that contributes to this inequality. They force a disproportionate number of minority students out of traditional education and subject them to a host of negative consequences, including dropping out and future arrest. Exclusionary discipline practices may then perpetuate the social conditions that education is supposed to counter.

Concentrated Discipline

It is difficult to assess the individual influences of race, class, and neighborhood conditions on school discipline because they are often closely connected in the United States. Most studies that examine student race and poverty, either at the individual- (Kirk, 2009; Skiba et al., 2002; Skiba et al, 2011) or school-level (Raffaele Mendez, Knoff, & Feron, 2002; Wu et al., 1982) find that race is a significant predictor of school discipline, even when controlling for

SES (Gregory, Skiba, & Noguera, 2010). In the school-to-prison pipeline literature, some scholars note that punitive discipline policies, and the concomitant implementation of intrusive security measures, are overly represented in urban schools, as opposed to suburban or rural schools, suggesting both a race and class inequity. Considering the plethora of research linking exclusionary discipline with lower test scores, poor grades, grade retention, and dropping out, this would perhaps explain the reduced educational attainment found in deprived neighborhoods (Garner & Raudenbusch, 1991). A concentration of school discipline would lead to lowered opportunities for the underclass and reproduced inequalities for future generations.

However, there are conflicting findings regarding where zero tolerance policies, and the criminalization of students more generally, are most often embraced. Some studies find a general movement towards criminalizing student behaviors (Kupchik, 2010; Simon, 2007), while others claim criminalization is concentrated in more disadvantaged schools (see Kupchik & Monahan, 2006; Kupchik & Ward, 2013; Raffaele Mendez et al., 2002). Some studies also report that racial disparity in discipline can be explained by school or district demographics (e.g., urbanicity, racial climate), but again, the type of school that fosters the differential treatment of black and white students is unclear. In opposition to other reports on school discipline and school settings, for example, Rausch and Skiba (2004) find that schools in suburban locales (as opposed to urban, town, or rural) have the highest out-of-school suspension and expulsion incident rates for black and Hispanic students.[8]

Empirical examinations of demographic variations have noted key differences in neighborhood contexts. Galloway, Martin, & Wilcox (2006) found that persistent absenteeism,

[8] The out-of-school suspension incident rate for black students was much higher than the rate for Hispanic students (52.39 per 100 students compared to 19.03), though both were higher than the white incident rates in all locales. The same pattern was found for the expulsion incident rates.

but not exclusion rates, is highly correlated with student poverty as well as all catchment area variables included in the study that were associated with socio-economic disadvantage. They also examine the catchment area and school demographics and reported few high correlations, noting the importance of distinguishing the two settings in analyses. There has also been some evidence that district-level educational inequality, unemployment inequality, and economic inequality are unrelated to the overrepresentation of black student suspensions (Eitle & Eitle, 2004). In contrast, other studies have found that the racial and ethnic composition of the school is highly correlated with neighborhood characteristics (Kirk, 2009), and considered school and community poverty as a single variable (Clark, Petras, Kellam, Ialongo, & Poduska, 2003). Payne, Gottfredson, and Gottfredson (2003) test for various school and neighborhood influences, including a factor measuring the percentage of black students and the level of poverty and disorganization in the community surrounding the school. This measure significantly predicted student delinquency and teacher victimization, even when controlling for school disorder, communal school organization, student bonding, and other neighborhood variables. This finding might suggest that suspension rates are higher in poor, black communities because students in these schools are worse behaved. However, other studies have not supported this hypothesis (Rocque, 2010; Welch & Payne, 2012).

Racial Threat

In his influential publication, *Race Prejudice As a Sense of Group Position*, Herbert Blumer (1958) proposed a more appropriate way of thinking about and discussing race prejudice. Previous scholarship had focused on the individual – how members of one racial group feel about members of another racial group. However, Blumer suggests that scholars

should instead focus on group relations – how one racial group is *positioned* in terms of another, and how the dominant racial group comes to define, and redefine, another racial group. The dominant group, as hypothesized by Blumer, thinks and acts in a way based on this positioning, and members of this group may treat individuals from the subordinate group according to their perceived status: "He forms his conception as a representative of the dominant group; he treats individual members of the subordinate group as representatives of that group" (1958, p.5). It is the position of one group in regards to another that is of importance, not the feelings of individual members from the dominant group towards members of the subordinate group.

Drawing from Blumer's discussion of racial group positioning, several theories of racial threat have developed. The concept of racial threat is that one group's position – whether economic, political, or social – threatens the security of another group. Members from the dominant group respond to this perceived threat with increased forms of social control to reduce this threat. As minority groups experience political, economic, and social mobility, the dominant group creates barriers that make it increasingly difficult for the subordinate group to achieve status.

Empirical studies of racial threat have reported mixed findings, though most find support for the argument. In an analysis of state adoption of felony disenfranchisement laws, Behrens, Uggen, & Manza (2003) found that large nonwhite populations increased the likelihood that a state would pass restrictive laws – a finding that supports the political threat perspective. Giles and Hertz (1994) examined voter partisanship in relation to the black population in Louisiana parishes, and their findings revealed that a higher proportion of the black population increased white voters' tendencies to identify as Republican rather than Democrat. Not all studies found support for the political threat hypothesis, though. Eitle, D'Alessio, & Stolzenberg (2002), for

example, examined South Carolina counties and found no effect of political threat – as measured by the ratio of black to white voting – on the amount of social control (as measured by arrest rates) experienced by blacks.

Some studies have used punitiveness and black arrest rates to measure racial threat, though the findings do not always support the racial threat hypothesis. For example, Stolzenberg, D'Alessio, and Eitle (2004) and Parker, Stults, & Rice (2005) found that as the size of the black population increases in urban cities, black arrest rates decline rather than increase (see also Chamlin and Liska, 1992; Liska and Chamlin, 1984). Other studies, however, have found that both increases in black on white crime and increases in the black population, in general, have a positive effect on punitiveness (Eitle et al., 2002; Jacobs, Carmichael, & Kent, 2005; Myers, 1990; Olzak, 1990; Soule, 1992).[9] The perception of blacks as dangerous predators has also been found to increase support for harsh criminal justice policies (Chiricos, Welch, & Gertz, 2004).

Racial Threat and Exclusionary Discipline

In the school context, specifically, the racial threat hypothesis has been applied to the use of harsh school discipline for minority students. Several studies test, and find support for, racial threat using the percentage of black students in schools and student exclusions (see Payne and Welch, 2010; Rocque, 2010; Rocque & Paternoster, 2011; and Welch and Payne, 2010, 2012). Rocque and Paternoster (2011) attribute this finding to *cultural threat* rather than economic or political threat experienced by teachers:

> [S]chool discipline can be understood within the context of racial threat theory because teachers (especially white teachers), with their culture of academic

[9] In these studies, punitiveness has been measured by arrest rates (county-level), incarceration (county-level), lynching (national-level), and the passing of harsh punishment laws (state-level).

> success and need for control over the school environment, may easily perceive black students as a source of trouble or a threat to their ability to control the cultural context of what goes on within the school. (p. 639)

They find that schools with a higher proportion of black students are more likely to use disciplinary tactics (and more often),[10] even while controlling for individual demographics, teacher accounts of individual student behaviors, teacher demographics, and other measures aggregated to the school level.[11]

One important concern regarding discipline disproportionality by race is whether or not black and Hispanic students are actually committing more (serious) violations. In other words, are high suspension and expulsion rates reflective of more frequent behavioral problems by minority students? Skiba et al. (2011) reported that black students are two to four times more likely to be referred to the principal's office for problem behavior compared to white students, and black and Hispanic students are also more likely to receive expulsion or out-of-school suspension for the same or similar problem behaviors of their white peers. Similarly, Peguero and Shekarkhar (2013) report that Latino/a students do not misbehave more than white students, but they are more likely to receive some form of school punishment. This process of singling out black and Hispanic youth as being especially problematic, despite similar types of infractions and frequency of violations, has been described as "differential selection" (Piquero, 2008). Teachers and administrators may perceive the behaviors of minority youth as troubling and exert strict discipline in order to control them. In support of this differential selection

[10] Rocque and Paternoster (2011) find that the proportion of black students has a positive effect on office referrals but only up to a certain extent, referring to the "benign neglect" hypothesis in the racial threat literature.

[11] Kirk (2009), while not explicitly testing racial threat theory, did not find a significant relationship between school-level percent black or percent Hispanic and suspension. However, this sample consisted of elementary school students (6th and 8th graders), and suspension was measured as a binary variable (student-reported suspension at least once during the academic year) rather than the school suspension rate.

hypothesis, Skiba and colleagues (2014) found principal perspectives on discipline to better explain exclusion disparities than either behavioral or individual characteristics. This differential treatment actually begins in the classroom, where the disproportionate number of black students referred to the office may be explained by cultural differences and biased interpretations of student behavior (Skiba, Peterson, & Williams, 1997; Skiba, Michael, Nardo, & Peterson, 2002). These racial differences have also been attributed to student perceptions of teacher qualities, where a higher proportion of black students were referred to the office if they were in a classroom with a teacher that was uncaring or had low academic expectations (Gregory & Weinstein, 2008).[12] The results from these studies indicate that discipline disproportionality is not due to the individual problem behaviors of minority students, but an effect of systematic biases and pejorative stereotypes (Irvine, 1990; Monroe, 2005; Wu et al., 1982), in which principals and teachers interpret black and Hispanic student behaviors, particularly those exhibited by black males, as more disruptive and less likely to respond to non-punitive forms of discipline.

The Present Study

With southern California as a research site, I use schools as the unit of analysis to understand the institutional processes that produce disparities in education, discipline, and beyond. While much of the discipline disproportionality research focuses on black students, this study also emphasizes the effect of Hispanic students – a minority group with a large presence

[12] The temporal ordering of black student referrals and perceptions of teacher qualities remains unclear. It could be that black students act out more in classrooms where they do not feel respected or cared about, or their perceptions of teacher qualities could be in response to high referral rates.

in southern California – on exclusionary discipline rates. The questions and attendant hypotheses addressed are:

1) How do school racial/ethnic composition and the proportion of disadvantaged students affect exclusionary discipline?

   H1: The proportion of black, Hispanic, and disadvantaged students are associated with higher exclusionary discipline rates.

   H2: The proportion of Hispanic students has a positive but lesser impact on exclusionary discipline compared to the proportion of black students.

   H3: Racial/ethnic composition and student disadvantage are less influential on more serious discipline.

2) Do neighborhood characteristics have a direct influence on the use of exclusionary discipline in local schools?

   H4: Percent black, percent Hispanic, and disadvantage positively affect exclusionary discipline.

3) Is there an impact on exclusion rates when school demographics vary from the surrounding neighborhood demographics?

   H5: When there are more black, Hispanic, and disadvantaged *students* in neighborhoods with more white or affluent *residents,* exclusion rates will be higher.

Based on previous studies that have examined individual and school level predictors of exclusionary discipline, I anticipate percent black, percent Hispanic, and SES disadvantage to positively affect exclusion rates (*H1*). Percent Hispanic is expected to influence the exclusion

rates to a lesser degree, in part based on prior research,[13] but also because having a large Hispanic student population in a southern California school is a normal occurrence (*H2*). I predict these school demographics will have the strongest effect on minor infraction suspension rates, which are typically more representative of administrator discretion than strict zero tolerance. Expulsions, which tend to be reserved for the most serious violations, are posited to be influenced by school and community factors to a lesser degree (*H3*). The neighborhood in which the school is located is also hypothesized to positively influence exclusion rates. Specifically, I predict higher rates in schools located in neighborhoods with more black, Hispanic, and disadvantaged residents. Although the findings on this have been mixed, it is plausible that schools in areas with more marginalized residents would use more punitive discipline (*H4*). Finally, when there are more black, Hispanic, and disadvantaged students in neighborhoods with more white or affluent residents, exclusion rates will be higher. I posit that this particular context is when racial threat is most pronounced (*H5*).

DATA AND METHOD

This chapter utilizes a combination of secondary data sources to answer the proposed research questions. Two school-level datasets – "Expulsion, Suspension, and Truancy" and "Academic Performance Index (API)" – have been retrieved from the California Department of Education (CDE). The first dataset contains information on school exclusions and enrollment, while the second provides information on standardized testing scores and school demographics. These

[13] Some prior studies using percent Hispanic at the school level have not supported the racial threat theory for Hispanic students (see Rocque & Paternoster, 2011; Welch & Payne, 2010; Conversely, see Welch & Payne, 2012, which finds evidence of Hispanic student racial threat for expulsions). However, southern California is unique a location because of the particularly high proportion of Hispanic students, and it is possible that Hispanic students rather than black students pose the cultural threat against the dominant white group.

data are available for school years 2004-05 to 2010-11.[14] School addresses and geographic locations were retrieved from CDE's "Public Schools and Districts" data file. Neighborhood demographic data are retrieved from U.S. Census 2000 and 2010 and the American Community Survey. For block-level data that were not provided by Census, these variables were imputed using information about the block groups in which these blocks are nested (see Hipp & Boessen, 2013) and linearly interpolated across years. The crime data for this study come from the Southern California Crime Study (SCCS). Researchers made an effort to contact each police agency in the Southern California region and request address-level incident crime data for the years 2005-2012. The data come from crime reports officially coded and reported by the police departments. Crime events were classified into six Uniform Crime Report (UCR) categories: homicide, aggravated assault, robbery, burglary, motor vehicle theft, and larceny. Crime events were geocoded for each city separately to latitude–longitude point locations using ArcGIS 10.2, and subsequently aggregated to various units such as blocks, block groups, and census tracts. The average geocoding match rate was 97.2% across the cities, with the lowest value at 91.4%.

This study employs school- year panel data. School data were spatially joined with Census data in ArcGIS, which resulted in 100% matched addresses. I integrate school data with block-level demographic and crime data in southern California and create quarter-mile spatial buffers around the school blocks to represent the school neighborhoods.[15] Analyses are limited to public secondary schools (including traditional middle and high schools and nontraditional schools) in these six Southern California counties from school years 2004-05 to 2010-11. I

[14] The "Academic Performance Index (API)" data are available from school years 1999-00 to 2013-14. However, the "Expulsion, Suspension, and Truancy" data are only available from 2004-05 to 2010-11.

[15] The advantage of using blocks is that multiple schools are present in block groups, and the individual effects of the area immediately surrounding the school, as well as individual school exclusion rates, would be lost when aggregated to the block group.

exclude the following school types: private and religious schools, elementary schools, and special education schools. These schools operate under different guidelines and may not be comparable to public secondary schools.

While most studies remove nontraditional schools (i.e., alternative, community day, continuation, county community, and opportunity schools) from analyses, I opt to include them because California state discipline policies apply to all public schools. High schools are defined by legislators as "four-year high schools, junior high schools, and senior high schools, continuation high schools, and evening schools" (California Education Code, Section 53). Exclusionary discipline practices might also be heightened in schools with known troublemakers, where removal from school could be the student's last chance at education. Moreover, there is a sizeable portion of nontraditional schools in southern California, and these schools, which contain some of the students most at-risk of dropping out, warrant investigation. The differences between the two populations (traditional and nontraditional schools) are controlled for by including a dummy variable and interactions for nontraditional schools in the models.

I omit the smallest 10% of schools (based on enrollment) from analyses for two reasons. First, very small schools are not likely to possess the same social dynamics that are found in larger schools. Second, many of the exclusion rate outliers were due to very small enrollments. After these schools were removed from the sample, the most extreme outliers in the exclusion rates disappeared.[16] The smallest school, after removing the bottom 10%, has an enrollment of 72.

<< INSERT TABLE 1.1 HERE >>

[16] For example, one community day school in San Bernardino had an expulsion rate of 100% with an enrollment of 2.

The full sample without missing data includes 125 districts and 994 schools. I limit all models to the full model sample.[17] Not all counties contribute equally to the sample (see Table 1.1). Los Angeles has, by far, the most districts (59) and schools (563), while Ventura has the least (1 and 8, respectively).[18] Roughly 42% of the sample are middle schools, 38% are high schools, and 22% are nontraditional schools. Nontraditional schools have, on average, the highest exclusionary rates, followed by middle schools and high schools (see Table 1.2). For example, middle schools experience about 9 minor incident suspensions per 100 students, 6 per 100 students in high schools, and nearly 19 per 100 students in nontraditional schools. Considering that nontraditional schools enroll students who struggled in some form with traditional schooling,[19] these findings are not surprising.

<< INSERT TABLE 1.2 HERE >>

Traditional versus Nontraditional Schools

Because traditional and nontraditional schools are markedly different educational settings, the descriptive statistics are split into two sections (Table 1.3). Among the traditional middle and high schools, most students are of Hispanic origin (57%), while black students represent less than 10% of the school population. There is a marginally higher percentage of Hispanic and black students in the nontraditional schools (61% and 12%, respectively). The average traditional secondary school has approximately 1,585 students compared to the average

[17] The neighborhood and full models contain missing crime data, thus limiting the sample to 4,839 observations. Crime data were not collected for all cities among the six counties.
[18] Because these counts are based on the final sample with no missing data, the number of schools is also limited to schools in areas without missing crime data. For example, some areas in Ventura are missing crime data; therefore, the school counts in Ventura are lower than the actual number of schools in the county.
[19] Nontraditional schools often enroll the most at-risk youths, including those referred for expulsions or at-risk of not graduating.

nontraditional school with about 307 students. The API is a single score ranging from 200 to 1000 that reflects each school's performance on statewide testing in multiple content areas. The mean API score in this sample of traditional schools is 707, which is higher than the state average for all public middle and high schools (668).[20] The nontraditional school average is much lower with a score of 561. Nontraditional schools also enroll more economically disadvantaged students than traditional middle and high schools, illustrating that poor and minority students have a higher representation in nontraditional schools than in traditional schools.

Southern California is a megapolitan area with a diverse population, reflected by the school neighborhood demographics. The majority of residents in the areas immediately surrounding all schools are Hispanic and white. However, the neighborhoods containing nontraditional schools have a slightly larger Hispanic population (47% compared to 43%) and roughly equivalent black population (7.6% compared to 7.8%) than the traditional school neighborhoods. A noticeable difference between these two educational groups' settings is neighborhood disadvantage; nontraditional schools are typically in more disadvantaged neighborhoods compared to regular middle and high schools, though the range of disadvantage is wide in both groups' neighborhoods. Nontraditional schools are also on average in areas with substantially higher violent crime rates (11,477 violent crimes per 100,000 residents compared to 5,584 per 1,000) but lower property crime rates (70,018 property crimes per 100,000 residents compared to 95,604 per 100,000).[21]

[20] The state average for all public middle and high schools in California was generated using the "Academic Performance Index (API)" data from school years 2004-05 to 2010-11. Alternative and special education school are grouped by a single dummy variable in this dataset; thus, special education schools contribute to the score of 668.

[21] Note that these large numbers reflect property and violent crimes per year aggregated to quarter-mile spatial buffers.

Dependent Variables

I examine three exclusionary discipline rates using school and neighborhood characteristics. CDE provides the number of suspension incidents, violent/drug suspension incidents (any suspension due to a violent- or drug-related violation), and expulsion incidents for all public schools at the end of the school year. The suspension and violent/drug suspension counts are not mutually exclusive; suspension includes violent/drug suspensions and all other minor violations that resulted in a suspension. I therefore separate suspensions into minor incident suspensions (outcome 1) and serious incident suspensions (outcome 2).[22] Expulsions (outcome 3) are reserved for the most serious offenses, while suspensions are much more commonplace. According to California policy, schools may suspend students for a number of violations, including but not limited to offenses that involve weapons, drugs/alcohol/tobacco, theft, damage to school property, attempts or threats to cause injury to another person, and/or disruptive behaviors (CA Section 48900). Therefore, it is most likely that the minor incident suspension count is primarily made up of behavioral misconduct and minor property offenses.[23] Incident rates for all three outcomes were generated using the number of students enrolled. For ease of interpretation, these rates were multiplied by 100 to display exclusions per 100 students.

<< INSERT TABLE 1.3 HERE >>

Independent Variables

School Characteristics

[22] CDE also provides counts for violent/drug expulsions, but these counts are highly correlated with expulsions, generally (Pearson's $r = .921$). Expulsions, therefore, are typically reserved for the most serious violent and/or drug incidents.

[23] In California, "willful defiance" is the most cited reason for exclusionary discipline, accounting for 37% of student suspensions (Torlakson, 2015). Several bills have been passed in the last few years that effectively eliminate this category as a suspendable offense.

This section assesses two sets of predictors that might influence discipline rates: school characteristics and neighborhood demographics. Among the school characteristics are API scores, racial/ethnic composition of the school (percent black and percent Hispanic), socioeconomic disadvantage, enrollment (logged), whether the school is a traditional middle or high school or a nontraditional school, dummy variables for year, dummy variables for each school district to account for any between district variation (for example, differences in discipline policies), and truancy rates.

Prior research suggests that schools with more black and disadvantaged students tend to use punitive discipline (Payne & Welch, 2010; Rocque, 2010; Rocque & Paternoster, 2011; Welch & Payne, 2010, 2012) – a possible reflection of the administrative perceptions and school discipline policies. Some scholars have suggested that percent black and/or percent Hispanic might not share a linear relationship with exclusion rates (Hagan, Shedd, & Payne, 2005; Jacobs & Tope, 2007). If this is the case, there may be a tipping point in which the black student population is perceived as the dominant group rather than a threatening minority group. It is also possible that, as suggested by Rocque and Paternoster (2011), greater social control is exerted on higher levels of the black student population "until the point is reached at which black students are more likely to be victimizing other black students or disrupting a predominantly black school environment" (p. 658). An alternative hypothesis might suggest that with greater diversity within the black student population, simply due to numbers, racial biases against the group as a whole (i.e., assuming homogeneity) diminish. This is even more likely with Hispanic students since, on average, they outnumber both black and white students.

<< INSERT FIGURE 1.1 HERE >>

To assess the appropriate functional form, I include squared percent black and percent Hispanic in the models. The quadratic term for percent black is statistically significant in the models, indicating that there is indeed a tipping point at around 60% black (see Figure 1.1). Although only 27 schools in the sample have a black student population that is over 60% of the total population, these schools have lower than average exclusion rates, in general.[24] I use a scatterplot to show the relationship between the percentage of black students and the minor incident suspension rate in Figure 1.2. There is no apparent outlier among the schools with over 60% black student populations; thus, the possibility of extrapolating beyond the data seems improbable. Moreover, the inclusion of the quadratic terms (for both percent black and percent Hispanic) improves the model fit compared to models using the linear and/or logged terms. A plot of the relationship between percent Hispanic and minor incident suspension rates is also included for reference (see Figure 1.3).

<< INSERT FIGURE 1.2 HERE >>

<< INSERT FIGURE 1.3 HERE >>

Schools with higher API scores are expected to have lower exclusion rates, as academic achievement and delinquency are typically negatively related. School enrollment – which often denotes "urbanicity" – is included to control for variation in exclusion or truancy rates based on the size of the school. In some settings, larger schools have been shown to increase discipline practices (Gottfredson & Gottfredson, 1985; Gregory, Cornell, & Fan, 2011; Irwin, Davidson, & Hall-Sanchez, 2013). A measure of socioeconomic disadvantage was created using principal component factor analysis on two items: percent of students eligible for a free or reduced lunch

[24] The average minor incident suspension rate among schools with an over 60% black student population is 8.68% compared to 9.75% for all schools; 6.50% for serious incident suspension rates compared to 7.09%; and 0.02% for expulsion rates compared to 0.44%.

and average parental education.[25,26] The percent of students eligible for free or reduced lunch has often been used as a measure of poverty in previous studies (Arcia, 2006; Gregory et al., 2011; Irwin et al., 2013; Rocque, 2010; Stewart, 2003) and is highly correlated with average parental education. One consistently significant individual-level characteristic that is not included is student gender – males are more likely to be excluded than females. This measure was not available in the datasets utilized by this study, but this does not seem to be problematic based on findings from previous school-level analyses; this characteristic has either not been a significant predictor of exclusionary discipline (see Welch & Payne, 2010) or has not been included in analyses (see Rocque & Paternoster, 2011).

When testing the racial threat hypothesis, it is important to include a measurement of student delinquency such that main effects can be attributed to administrator perspectives rather than level of school disorder. While student-reported delinquency has been used in prior studies, the data employed in this study are official school data that do not contain student self-reports. I therefore consider truancy rates as proxy measure of overall student delinquency. Truancy is a form of delinquency that may reflect low school attachment (Vaughn, Maynard, Salas-Wright, Perron, & Abdon, 2013). It has previously been linked to antisocial behavior (e.g., drug and alcohol use, violence, delinquent peers, and gang activity; Zhang, Katsiyannis, Barrett, & Willson, 2007) and future delinquent or criminal behavior (Rocque, Jennings, Piquero, Ozkan, and Farrington, 2016; Tennent, 1971). In their study of persistent delinquency, Glueck and Glueck (1950) reported that for 94.8% of the delinquents in their sample, as compared to only 10.8% of nondelinquents, truancy was the most frequent and earliest indicator of maladjustment

[25] According to Yong and Pearce (2013), "A factor with 2 variables is only considered reliable when the variables are highly correlated with each another ($r > .70$) but fairly uncorrelated with other variables." Percent student eligible for free or reduced lunch and average parental education have a Pearson's r of -.726.

[26] Factor analysis with two variables produces the sum of the standardized values.

in school. Some police departments even reported a reduction in crime rates during the daytime after conducting truancy sweeps (Garry, 1996; Shuster, 1995). Hence, it is reasonable to assume that truancy rates do capture some level of overall student misconduct.[27, 28]

Neighborhood Characteristics

There are several ways that school neighborhood has been defined in previous research. Boggess (2013) and Welsh, Greene, and Jenkins (1999), for example, aggregate census block groups and census tracts, respectively, that are within a quarter mile of the school. Any block that intersected the quarter mile radius from the school was included in the model. Other measures of school neighborhood include aggregate block groups and dummy variables to indicate whether or not a school was present in that block group (Willits et al. (2013),[29] or information on each school's surrounding community based on the school's zip code area (Payne and Welch, 2010).

<< INSERT FIGURE 1.4 HERE >>

To assess the impact of the school neighborhood on student exclusion rates, I follow Boggess (2013) and Welsh et al. (1999) by generating quarter-mile spatial buffers, but I use blocks (instead of block groups) with a distance decay function for each neighborhood

[27] Welch and Payne (2012) use a measure of student crime and delinquency based on student survey responses and, similar to this study, find that student delinquency is unrelated to exclusionary discipline outcomes in traditional public secondary schools.

[28] I also followed a method utilized by Gelman, Fagan, and Kiss (2007) to consider preexisting administrator expectations of student misconduct. In their study on whether racial biases explain the high stop rates in poor, minority neighborhoods in New York City, Gelman and colleagues use the previous year's arrest rate to represent the frequency of criminal activity by each racial group expected by police. To test for this phenomenon in a school setting, I temporally lagged truancy rates by one year to serve as a baseline for administrator expectations of student misconduct. While I could not estimate delinquency by student race, I was able account for how much overall delinquency administrators anticipate if discipline practices remain the same. This measure of student delinquency (previous year's truancy rate) was not statistically significant in the models.

[29] Willits et al. (2013) report that they analyzed the block group rather than blocks in order to use more social, economic, and demographic information provided by the U.S. Census Bureau and more precisely test social disorganization theory.

demographic variable (See Figure 1.4 for an example of a quarter-mile buffer and map of all secondary schools in Southern California). This smaller geographic unit allows for more precise measurements of the area surrounding the school.[30] More specifically, I include spatial measures for percent black, percent Hispanic, disadvantage, racial/ethnic heterogeneity, occupied housing, ages 5 to 14 (approximate middle school age),[31] ages 15 to 19 (approximate high school age), population (logged), residential stability, violent and property crime rates, and year dummies. The racial/ethnic heterogeneity measure is based on the Herfindahl index using five racial categories – white, black, Latino, Asian, and other. The Herfindahl index is as follows:

$$\mathrm{H} = \sum_{i=1}^{N} {s_i}^2,$$

where N is the total number of racial groups (5) and s_i is the proportion of racial group i. this number from one to create a measure of heterogeneity, where higher values represent greater heterogeneity. Social disorganization theory suggests that neighborhoods with greater heterogeneity are less likely to experience social cohesion based on shared norms and values, which results in greater disorganization and weakened mechanisms to prevent crime. Schools in neighborhoods with greater heterogeneity, therefore, might experience more school disorder, especially if the neighborhood disorganization affects the school's ability to enforce social control.

[30] The spatial buffers are generated with a distance decay function; therefore, extending the buffer to include greater distances (e.g., 0.5-mile spatial buffer) only marginally affects the values. In general, these spatial buffers are highly correlated.
[31] Because some middle schools include lower grades (e.g., K-8 schools), I include younger ages as a control.

Measures of neighborhood disadvantage and residential stability are created using confirmatory factor analysis. Disadvantage is a factor score captured by percent below poverty, average household income, persons with a bachelor's degree, and single parent families. This measure is used to assess whether or not schools in disadvantaged neighborhoods are prone to more punitive discipline. Residential stability, also a factor score, is measured as the mean of the standardized values of percent homeowners and average length of residence. If the neighborhood experiences frequent residential turnover, residents' (and therefore, students') ties to the community will be weaker. As such, the local school might experience more disorder, and as a consequence, more exclusionary discipline. Occupied housing is another indicator of social organization (or disorganization, as the values decrease), and population is used to control for expected differences in community disorder based on available victims and offenders. Finally, because youth have weaker ties in the community and are also more crime-prone than adults, two age variables (i.e., percent ages 5 to 14 and percent ages 15 to 19) are included.

The racial/ethnic composition of the school is highly correlated with the racial/ethnic composition and level of disadvantage of the neighborhood,[32] which precludes these neighborhood race/ethnicity variables from being in the full model. I therefore create three neighborhood and school difference variables: percent black difference, percent Hispanic difference, and disadvantage difference.[33]

[32] This supports the assumption that students who reside in the school neighborhood also attend the local school.

[33] These variables were generated by subtracting the school demographics from the neighborhood demographics (e.g., difference = neighborhood percent black – school percent black). Thus, positive values indicate a higher percentage of black/Hispanic or disadvantaged residents in the surrounding neighborhood compared to the school, while negative values indicate a lower percentage of black/Hispanic or disadvantaged residents in the surrounding neighborhood compared to the school.

The neighborhood crime measures are of particular interest for a couple reasons. While the racial threat hypothesis suggests that schools with more minorities will have higher suspension rates, it does not explain by what school administrators are threatened. While some suggest a general threat to political or economic control, school safety research finds that teachers also perceive black students to be worse behaved than white students (Monroe, 2005; Noguera, 2009; Skiba, Michael, Nardo, & Peterson, 2002). If the fear is based on the belief that black students exhibit more problematic behaviors, and it is delinquency that threatens administrators, then it is possible that neighborhood crime is more predictive of school suspension rates than the proportion of black students.[34] Alternatively, if punitive school discipline parallels the criminal justice system, as it often has, then we might expect no relation between level of crime and punitive discipline (see Eitle & Eitle, 2004). The issue of heavily policing poor, black neighborhoods, and the subsequent harassment felt by residents, may transcend into the school setting, whereby school administrators feel a need to exert social control in these same areas based on perceived, rather than observed, threat.

Analytic Strategy

I estimate a series of fixed effects models to answer the proposed research questions. Because school administrators – those who determine the use of suspensions and recommend expulsions – are likely influenced by the school conditions of each particular year, I estimate pooled cross-sectional models. I first examine the impact of school characteristics on minor incident suspension, serious suspension, and expulsion rates separately (model 1), followed by

[34] Welch and Payne (2010) control for student delinquency and drug use at the school level; they do not find a significant relationship between delinquency and drug use and punitive discipline. However, school administrators may perceive black *students* as worse behaved but do not hold all black people in the same regard. Moreover, a statistically significant finding of neighborhood percent black while controlling for crime would be especially revealing.

models predicting the effects of the school's surrounding neighborhood on these exclusion rates (model 2), and finally the full models which include both school and neighborhood characteristics (model 3).

I also test whether the effect of nontraditional schools on exclusion and truancy rates is significantly different than traditional schools by performing the Chow test – a test of whether the coefficients in two linear regressions on different datasets (in this case, traditional and nontraditional schools) are equal. I include school as well as neighborhood characteristics in these regressions since nontraditional schools, as noted above, tend to be situated in demographically different communities, and I do this for all three exclusion outcomes. The results of the Chow tests provide very strong evidence ($p < .0001$) that the relationship between nontraditional schools and their neighborhoods and school exclusion rates are characteristically different than traditional schools. I therefore generate interactions of the dummy variable "nontraditional" and each school and neighborhood demographic to examine these differences. The full models are expressed by

$$y_t = \alpha + \beta_1 SCHOOL_t + \beta_2 DELINQUENCY_t + \beta_3 NEIGHBORHOOD_t + \beta_4 DIFFERENCE_t + \beta_5 NONTRADITIONAL_t + \beta_6 DISTRICT_t + \beta_7 YEAR_t,$$

where y represents exclusion rates, α is an intercept, SCHOOL is a matrix of the school characteristics, DELINQUENCY is a measure of overall school delinquency, NEIGHBORHOOD is a matrix of the neighborhood demographics, DIFFERENCE represents the three neighborhood-school race/ethnicity and disadvantage differences, NONTRADITIONAL is a matrix of the nontraditional school interactions, including school and

neighborhood characteristics, DISTRICT is a matrix of the dummy variables for school districts, and YEAR is a matrix of year dummy variables.[35]

To test whether the effects of school racial/ethnic composition and disadvantage on school exclusions depends on the neighborhood racial/ethnic composition and level of disadvantage, I generate 12 interaction terms by multiplying each of these three different school measures (i.e., percent black, percent Hispanic, and SES disadvantage) with four different neighborhood measures (i.e., percent black, percent Hispanic, percent white, and disadvantage).[36] Each interaction term is included in the full models separately, resulting in 36 separate fixed effects regression models (12 interactions and 3 exclusion outcomes). These interactions build on the model described above (+ β_8SCHOOL×NEIGHBORHOOD$_t$).[37]

Finally, because these data are stacked by school and academic year, such that there are multiple observations for each school, I obtain clustered robust standard errors to adjust for an intraclass correlation within schools.[38] I also check for multicollinearity in the models using

[35] I use this same equation but with traditional school dummy interactions to estimate the direct effects of nontraditional schools on exclusion rates (where β_5TRADITIONAL$_t$ replaces β_5NONTRADITIONAL$_t$). This produces the same coefficients as summing the direct effects of traditional schools with the nontraditional dummies. It is admittedly repetitive and is therefore not displayed in a table.

[36] These variables were mean-centered to reduce correlations with their interaction products (Allison, 2012).

[37] Using the Hadi method for influential cases (see Hadi 1992, 1994) – a postestimation technique that identifies multiple outliers – I generated the Hadi statistic and identified 91 cases among 31 schools. All schools were in Los Angeles County, with 67 (74%) of them in the Los Angeles Unified School District. They also had especially high percentages of black students enrolled, averaging over 75% black student enrollment, which is roughly 66% higher than the full sample mean. Because the Hadi statistic appeared to identify schools with unusually high black student enrollments – a group of schools that are pertinent to this study – I chose not to exclude the identified influential cases.

[38] Stata provides a "cluster" command to obtain robust standard errors when analyzing correlated data.

variance inflation factors (VIF); all VIFs are below 10 for the variables of interest.[39] All analyses are performed using Stata 13 (StataCorp, 2013).

RESULTS

Multivariate Regression – Main Effects

The first sets of models assess the effects of school and neighborhood characteristics on three exclusion incident rates: minor incident suspensions, serious incident suspensions, and expulsions. (Tables 1.4-1.6). The first model in the sequence contains just school characteristics (M1), the second model contains just neighborhood characteristics (M2), and the full model contains both school and neighborhood characteristics (M3). Results for traditional and nontraditional schools are displayed separately. Year and school district dummy variables are included in the models but not presented in the tables.

<< INSERT TABLE 1.4 HERE >>

Minor Incident Suspension Rates

Table 1.4 displays the fixed effects results estimating minor incident suspension rates. The main predictors of interest are racial/ethnic composition (i.e., percent black, percent Hispanic) and SES disadvantage. Nearly every school characteristic significantly predicts minor incident suspension rates in traditional schools. Consistent with prior studies and in support of Hypothesis 1, the percentage of black students in traditional schools is significantly associated

[39] While selecting a cutoff point to conclude when multicollinearity is problematic, especially for variables that should, theoretically, be included in the model, some choose a value of 10 (Wooldridge 2009). Multicollinearity among control variables, products of other variables (in which correlations can be lowered by centering the variables), and indicator variables that represent a categorical variable with three or more categories (e.g., middle, high, and nontraditional) can be safely ignored (Allison, 2012).

with higher suspension rates (b = .200, p < .01). The squared term is also significant but negative in direction (b = -.001, p < .05), suggesting a curvilinear relationship between percent black and minor incident suspension rates. Specifically, as noted earlier, when the black student population reaches approximately 60% (i.e., the inflection point), the positive effect of percent black on the minor incident suspension rates is reversed. Schools with very high black student populations experience a decrease in minor incident suspensions.

I hypothesized differential effects for black and Hispanic students on exclusionary patterns, though both were posited to increase exclusions. Like previous research, however, this study does not support the racial threat hypothesis for the Hispanic student population, despite the uniquely large Hispanic population in southern California. The percentage of Hispanic students does not significantly influence the minor incident suspension rate, as neither the linear term nor the quadratic term are statistically significant.

Finally, schools with more students who are socioeconomically disadvantaged are associated with higher minor incident suspension rates (b = 1.259, p < .05). The fully standardized coefficients are included in the tables to make comparisons of the effect sizes. For example, a one standard deviation increase in percent black yields a .153 standard deviation increase in the minor incident suspension rate up to the inflection point (i.e., when the school is 60% black or higher), at which point the effect reverses in direction, decreasing by 0.082 standard deviations. Therefore, the effect of the black student population on the minor incident suspension rate is stronger than that of student disadvantage (*beta* = .067). In fact, it has the strongest effect out of all predictors in the school model, highlighting the significance of student race on punitive discipline. For nontraditional schools, student racial/ethnic composition and the proportion of disadvantaged students do not directly affect minor incident suspension rates.

As expected, larger traditional schools are associated with higher suspension rates (b = 1.674, $p < .001$) and traditional schools with higher API scores are associated with lower suspension rates (b = -.120, $p < .001$). High schools, as compared to middle schools, tend to have lower suspension rates (b = -3.563, $p < .001$). Student delinquency, however, is not statistically significant, similar to what Welch and Payne (2010) found in their school-level analysis of racial threat. Even while controlling for the overall level of delinquency in the school, the proportion of black and disadvantaged students in traditional schools still significantly relates to higher minor incident suspension rates. This suggests that student demographics, but not their behaviors, are driving exclusion rates. Conversely, in nontraditional school settings, student race and ethnicity and socioeconomic status do not directly influence minor incident suspension rates, but student delinquency does (b = .177, $p < .001$). Thus, the relationships between school characteristics and exclusionary discipline is starkly different for traditional and nontraditional schools.

The neighborhood effects on suspension rates are seen in model 2 (M2). None of the neighborhood predictors are significant for traditional schools, suggesting that neighborhood context does not seem to directly influence minor incident suspensions. The neighborhood characteristics of nontraditional schools tell a slightly different story. The percent of the surrounding neighborhood ages 5 to 14 has a significantly greater effect on minor incident suspensions in nontraditional schools than traditional schools (b = 1.405, $p < .01$). Based on the R-squared for this equation (.342), the neighborhood model does not explain the suspension rates as well as the model containing only school characteristics (R^2 = .405).

Model 3 (M3) displays the results of the full model including both school and neighborhood characteristics. For traditional schools, all school characteristics that were

statistically significant in model 1 retain significance in the full model except student disadvantage. The proportion of black students is still a significant predictor of minor incident suspensions in the full model (percent black: $b = .154$, $p < .01$; percent black squared: $b = -.091$, $p < .05$). Violent crime, after controlling for the property crime rate in the surrounding neighborhood, is now associated with higher minor incident suspension rates ($b = .000$, *beta* = .012, $p < .05$), and this is the only neighborhood variable that is statistically significant. The neighborhood-school difference variables are not significant, meaning greater representations of minority and/or disadvantaged students compared to local residents do not appear to influence minor suspensions in the local traditional school.

Comparing traditional schools to nontraditional schools, there are several differences in the impact of both school and neighborhood characteristics on minor incident suspension rates. Among the nontraditional school characteristics, only API scores and student delinquency significantly influence the minor incident suspension rate. Among the neighborhood variables, only areas with higher percentages of kids ages 5 to 14 are associated with higher minor incident suspension rates. The neighborhood-school difference variables, like in the traditional school, are not significant predictors of minor incident suspension rates in nontraditional schools. With an R-squared of .425, the full model explains the most variation but not much more than the school model alone. Thus, when considering both school and neighborhood factors, it appears that the school characteristics are more influential on minor incident suspension rates than the neighborhood characteristics.

Serious Incident Suspension Rates

Table 1.5 displays the results of the models estimating serious incident suspension rates, which are suspensions resulting from violent or drug violations that were not severe enough to warrant an expulsion. All school characteristics in the school model are significantly associated with serious suspensions except student disadvantage and delinquency. Although the percent black quadratic term is not statistically significant, it is negative in direction (b = -.093), suggesting that a curvilinear relationship is present. For traditional schools, percent black has the strongest positive influence among the primary variables of interest on the serious incident suspension rate (*beta* = .179 compared to .099 for student disadvantage). Percent Hispanic and delinquency are not statistically significant. For nontraditional schools, racial/ethnic composition and student disadvantage are again not related to exclusion rates, but student delinquency is significant (b = .091, p < .001) and the strongest predictor in the model (*beta* = .314).

<< INSERT TABLE 1.5 HERE >>

The neighborhood characteristics model results for serious suspensions differ from those for minor suspensions. Whereas there were no significant neighborhood predictors for minor incident suspension rates, percent black, population size, and the property crime rate are all significant predictors of serious incident suspensions in traditional middle and high schools. More specifically, increases in all three neighborhood characteristics are associated with higher serious incident suspension rates. Schools in neighborhoods with higher property crime rates tend to have higher serious incident suspension rates (b = .002, *beta* = .042, p < .01); there is no significant, independent relationship found between violent crime and serious suspensions in the neighborhood model. Percent black is the only significant predictor among the primary neighborhood characteristics (b = .056, *beta* = .075, p < .05) for traditional schools.

Racial/ethnic composition and disadvantage are not significantly related to serious incident suspension rates in nontraditional schools. The only neighborhood variable that is associated with serious suspensions in nontraditional schools is the proportion of residents ages 5 to 14 and population size (b = .502, p < .05 and b = -3.406., p < .05, respectively). Areas with more children, but fewer residents in general, tend to have higher serious incident suspension rates. With an R-squared of .272, school neighborhood explains less of the variance in serious incident suspension rates compared to minor incident suspension rates.

The results of the full model also vary slightly from the minor incident suspension rate results. Overall, the school characteristics are still the strongest predictors, particularly standardized test scores. The only school characteristics that are not associated with the serious incident suspension rate are percent Hispanic and delinquency. Percent black is again statistically significant in the full model (b = .212, p < .01), along with the squared term (b = -.132, p < .05). More elementary and middle school aged children, greater population sizes, and higher violent crime rates in the area are also associated with increased serious incident suspension rates in the local traditional school.

The full model results for nontraditional schools are similar to the school and neighborhood models; percent ages 5 to 14, however, is no longer significant. The differences in racial/ethnic composition and disadvantage between the school and its surrounding community are not related to serious incident suspension rates in local traditional schools, but these relationships differ for nontraditional schools. For nontraditional schools in communities with a higher proportion of Hispanic residents than students in the local school, the serious incident suspension rate tends to be higher (b = .107, p < .05). In contrast, when the proportion of residents who are disadvantaged is greater than the proportion of disadvantaged students in the

local nontraditional school, the serious incident suspension rate is lower (b = -.301, p < .05). Put another way, when the proportion of disadvantaged students is greater than the proportion of disadvantaged residents in the surrounding community, serious incident suspension rates are higher in nontraditional schools. Although the primary variables of interest do not appear to directly affect exclusion rates in nontraditional schools, the contrasting neighborhood and school contexts do influence exclusionary discipline.

<< INSERT TABLE 1.6 HERE >>

Expulsion Rates

The results of the models estimating expulsion rates are shown in Table 1.6. Expulsions are much less common as they are typically reserved for only the most serious violations, and recommendations put forth by school administrators must be reviewed and determined by the local school board. As such, it was hypothesized that the predictors of suspension and expulsion rates would vary, with a lesser impact of student racial/ethnic composition and SES disadvantage on expulsion (Hypothesis 3). The results partially support this hypothesis. Among traditional schools, only SES disadvantage is significantly associated with higher expulsion rates (b = .114, p < .01) in the school characteristics model (M1). Racial and ethnic composition of the traditional secondary school does not significantly influence the most serious violation rate, which is also the most likely discipline rate to reflect student behaviors. The only major differences between traditional and nontraditional schools are the effects of standardized test scores and student delinquency. The API score is not a significant predictor of expulsion rates in traditional schools, but it is for nontraditional schools. Higher rates of student delinquency are

also not related to expulsion rates in traditional schools, but is again a significant predictor in nontraditional schools ($b = .011$, $p < .001$).

Hypothesis 4 posited that the three variables of interest at the neighborhood level would positively affect exclusion rates. This does not appear to be true for either school type. Local crime rates also differentially affect traditional and nontraditional school expulsion rates. Traditional school expulsion rates are not significantly associated with local crime, but higher property crime rates in the areas surrounding nontraditional schools are associated with higher rates of expulsion, and higher violent crime rates are associated with lower rates of expulsion. It is worth noting that the neighborhood characteristics explained the variance in expulsion rates as well as the school characteristics model (31.2% for both), suggesting that elements of the neighborhood are just as important as the school when it comes to the most serious school infractions.

Once school and neighborhood characteristics are considered simultaneously, the only variables significantly influencing traditional school expulsion rates are student SES disadvantage ($b = .089$, $p < .05$) and the percent Hispanic neighborhood-school difference variable. Schools in areas with increasingly more Hispanic students than residents are associated with higher expulsion rates. Percent black is not a significant predictor of the most serious student offenses. Among nontraditional schools, the primary variables of interest do not seem to influence expulsion rates, but delinquency remains a significant predictor and is the strongest school predictor in terms of a standard deviation increase (*beta* = .267). The neighborhood variables have generally the same effect on expulsion rates in the full model as the neighborhood models, except the impact of property crimes on expulsion rates loses significance.

Contrasting School and Neighborhood Demographics

To further investigate the dynamic relationships between schools, neighborhoods, and exclusion rates, I add interaction variables to the models described above. I am primarily interested in how higher proportions of minority and disadvantaged students impact exclusion rates when they are in neighborhoods with higher proportions of white or affluent neighborhoods, though the other school-neighborhood contexts are investigated as well. Previous research has found contextual differences at the individual level for black and white boys based on the school neighborhood's average income (Clark et al., 2003). This study examines school-level differences. Table 1.7 displays the results of 36 (12 interactions types × 3 outcomes) separate fixed effects models for traditional and nontraditional schools, each including a new school × neighborhood interaction. Although the racial/ethnic composition and disadvantage variables were highly correlated at the school and neighborhood levels, the distribution of the neighborhood/school difference variables reveals significant variation.[40] Only the variables of interest (i.e., the school × neighborhood interaction) are displayed in the table, though all school and neighborhood variables from Tables 1.4-1.6 are included in each model.

The following sections cover the neighborhood-school contexts that are statistically significant for traditional schools, nontraditional schools, and both school types. In total, there is one neighborhood-school setting that affects exclusion rates in the local traditional school only, three settings that affect exclusion rates in the local nontraditional school only, and two settings that significantly impact exclusion rates in both school types.

[40] Each of the three neighborhood/school difference variables are fairly normally distributed with a wide range of values. The difference in percent Hispanic, for instance, has an average of -13.6 (a higher percentage of Hispanic students than residents) with a range from -75.2 to 73.6. The difference in percent black averages at -2.6 with a range from -69.9 to 46.0, and the average difference in disadvantage is 0.5 with a range from -44.7 to 23.0. These values are based on the entire sample.

<< INSERT TABLE 1.7 HERE >>

Traditional Schools

Hypothesis 5 is addressed in this section. I predicted higher exclusion rates in schools with higher percentages of black, Hispanic or disadvantaged students in neighborhoods with a higher percentage of white or affluent residents. The results for traditional schools do not support this hypothesis as only three of these interactions are statistically significant, and none include the percentage of white residents or level of neighborhood disadvantage.

<< INSERT FIGURE 1.5 HERE>>

Percent Black (School) × Percent Black (Neighborhood)

For each of these figures, and every figure hereafter, the graph represents one standard deviation above and below the mean for both variables. Because both the school characteristic and the neighborhood characteristic are mean-centered, the average settings are equal to 0. Figure 1.5 displays the relationship between the proportion of black students and expulsion rates, moderated by the percentage of black residents in the surrounding community. Schools in communities with a lower representation of black residents have the highest expulsion rates relative to average or above average neighborhoods, and this is true regardless of the percentage of black students in the local school. However, the expulsion rate increases in neighborhoods with a higher proportion of black residents as the percentage of black students increases. Schools in neighborhoods with an average proportion of black residents also experience an increase in the expulsion rate as the black student population increases, but at a lower rate than the above average proportion black neighborhood. It was hypothesized that exclusionary rates

would be higher when school demographics contrasted neighborhood demographics; instead, it appears the *concentration* of black students in neighborhoods with more black residents increases social control.

Nontraditional Schools

Disadvantage (School) × Percent Hispanic (Neighborhood)

<< INSERT FIGURE 1.6 HERE>>

The first setting that is significant only for nontraditional schools is represented by Figure 1.6– the effect of the proportion of disadvantaged students on serious incident suspension rates and how these results vary according to the proportion of Hispanic residents in the surrounding neighborhood. In high percent Hispanic neighborhoods, the suspension rate decreases as the proportion of disadvantaged students increases; in low percent Hispanic neighborhoods, the suspension rate increases with the proportion of disadvantaged students. The rate is highest in high percent Hispanic areas until the proportion of disadvantaged students in the nontraditional school is at a proportion that is one standard deviation above average. At this point, the suspension rate in lower than average Hispanic neighborhoods surpasses the rate of higher than average Hispanic neighborhoods. In other words, schools with more disadvantaged students appear to be protected from increases in social control when they are in neighborhoods with more Hispanic residents, but are subject to increases in social control when they are located in areas with low percentages of Hispanic residents.

Percent Black (School) × Percent White (Neighborhood)

Figure 1.7 displays the relationship between the proportion of black students in the nontraditional school and minor incident suspension rates, as moderated by the percentage of white residents in the neighborhood. Similarly, Figure 1.8 shows this same setting but with serious incident suspension rates, and both support hypothesis 5. Although the suspension rates are higher in areas with a below average proportion of white residents when the percentage of black students is low, this changes as the proportion of black students increases. Minor and serious incident suspension rates increase in schools with higher percentages of black students when the school is in a neighborhood with more white residents. There are a couple of noticeable differences between the two types of suspensions. For minor incident suspension rates, higher percentages of black students increase the exclusion rate for all neighborhood settings. However, for serious incident suspension rates, the exclusion rate in below average percent white neighborhoods remains relatively constant while the average and above average white neighborhoods experience increases in social control as the black student population grows.

<< INSERT FIGURES 1.7-1.8 HERE>>

Disadvantage (School) × Percent White (Neighborhood)

<< INSERT FIGURE 1.9 HERE>>

The relationship between the proportion of disadvantaged students and serious incident suspension rates, moderated by the proportion of white residents in the neighborhood, is depicted in Figure 1.9. The results are similar to those described above using the proportion of black students rather than the proportion of disadvantaged students. Again, the serious incident suspension rate is highest when the proportion of disadvantaged students is above average and

the schools is in a neighborhood with a high proportion of white residents. However, this relationship differs from the setting with the percentage of black students when the neighborhood has a below average proportion of white residents. In this particular context – a neighborhood with a low proportion of white residents – the suspension rate decreases as the proportion of disadvantaged students increases. As such, the contrast between neighborhoods with below and above average percentages of white residents is even more pronounced with disadvantaged students. Notably, support for hypothesis 5 is only present in the suspension models in nontraditional schools, where disciplinary outcomes are often based on administrator discretion.

Both School Types

Percent Hispanic (School) × Percent Black (Neighborhood)

<< INSERT FIGURE 1.10-1.11 HERE>>

The proportion of Hispanic students only influences school exclusions when the neighborhood context is considered, and this is true for both traditional and nontraditional schools. As seen in Figures 1.10 and 1.11, exclusion rates decrease as the Hispanic student population increases, regardless of the percentage of black residents in the surrounding neighborhood. Furthermore, when the school is in a below average percent black neighborhood, exclusion rates are highest. This is the first neighborhood-school setting that has operated similarly for both school types, though this context is significant only for the most serious offenses for traditional schools, and impacts minor incident suspensions for nontraditional schools.

Disadvantage (School) × Percent Black (Neighborhood)

<< INSERT FIGURE 1.12-1.13 HERE>>

The last neighborhood-school setting considers how the proportion of black residents in the neighborhood moderates the relationship between the proportion of disadvantaged students and serious incident suspension rates. Unlike the previous setting, this relationship is different for traditional and nontraditional schools. In traditional schools (Figure 1.12), the serious incident suspension rate increases at the highest rate as the proportion of disadvantaged students increases in neighborhoods with low proportions of black residents. In nontraditional schools (Figure 1.13), serious incident suspension rates increase the fastest when the school is in a neighborhood with a high proportion of black residents. Therefore, social control increases with the proportion of disadvantaged students in all schools, but it is particularly evident in traditional schools when the neighborhood has fewer black residents (hinting at the racial threat hypothesis) and in nontraditional schools when the neighborhood has more black residents (suggesting support for the social reproduction hypothesis).

DISCUSSION

This study is the first to assess numerous school and neighborhood influences and their combined effect on exclusion rates. It specifically examines whether school and/or neighborhood racial and ethnic composition and disadvantage significantly affect exclusionary discipline in local secondary schools. It also includes nontraditional schools – an often ignored school type with high-risk students – to understand how these processes work in the average school compared to schools with more troubled youth.

The findings for traditional middle and high schools support the racial threat and social reproduction hypotheses in a school setting, similar to previous studies (Payne & Welch, 2010; Rocque, 2010; Rocque & Paternoster, 2011; Welch and Payne, 2010, 2012). Hypotheses 1-3 address the school characteristics associated with exclusions and truancy. This study finds that traditional schools with higher percentages of black students are associated with higher suspension rates, but this effect reverses once the black student population reaches over 60 percent. Rocque and Paternoster (2011) postulate that when the black student population reaches a critical point, the disruption caused by black students only affects other black students and the cultural threat declines. Alternatively, it might be the case that in greater numbers, black students are no longer viewed as a homogenous group, and racial biases – not cultural threat – actually decline. The second school variable of interest is student disadvantage, which, like the percent black variable, was significant in the suspension but not expulsion rate models. Other studies have also identified student disadvantage as a predictor of harsh discipline at the individual level (e.g., Welch and Payne, 2012). These findings support both social reproduction and racial threat and confirms there are conditions beyond the individual that influence exclusionary discipline, thereby reinforcing existing barriers to social and economic advancement.

This study reinforces the racial threat hypothesis that larger black and disadvantaged student populations are responded to with strict forms of social control, but this is not the case for Hispanic students in traditional middle and high schools. Although it has been repeatedly shown that Hispanic students are disproportionately disciplined at the individual level, there is no apparent group threat based on the proportion of Hispanic students at the school level. Moreover, the uniquely high representation of Hispanic students in southern California did not

impact the findings, as null results are consistent with studies that contained samples with significantly smaller proportions of Hispanic students. Hence, hypothesis 2 is not supported by this study. The lack of support for racial threat and social reproduction is further evidenced by the contextual models, where a higher proportion of Hispanic students reduces – rather than increases – punitive discipline in both school types, regardless of the proportion of black residents in the neighborhood.[41]

The results from the full models revealed that school characteristics are more likely to determine exclusion rates than the direct effects of neighborhood characteristics. The only primary neighborhood variable that was significant in the neighborhood models was the percentage of black residents in the traditional school neighborhood. However, this study expands on previous research by including school and neighborhood variables simultaneously and exposed the finding that the school and neighborhood context is a better determinant of punitive discipline than just school characteristics alone. The exact characteristics of the neighborhood that enhance punitive discipline in schools with a greater representation of minority students were investigated further in the contextual models.

Hypothesis 5 – that higher proportions of minority or disadvantaged students in neighborhoods with more white or affluent residents would result in greater social control – was unsupported by the findings in this study for traditional schools, but other interesting findings emerged. All statistically significant interactions for traditional schools included the proportion of black residents in the neighborhood. Schools with more black and disadvantaged students are more likely to use exclusionary discipline when they are located in schools with more black residents. For schools with more Hispanic students, this trend is in the opposite direction,

[41] In general, higher proportions of black residents in the neighborhood increases exclusionary discipline rates in the local traditional school.

suggesting a protective factor for Hispanic students. Blacks are perhaps perceived as the most culturally threatening group in any setting, at least compared to Hispanic students, and this is the predominant finding for the discretionary discipline models. This finding corroborates the school processes described by Monroe (2005) and Poguera (2009), who maintain that black males, specifically, are targeted by teachers and administrators because of how these students (and black people, generally) are perceived – as menaces to society that must be controlled.

I next turn to the results of the nontraditional school models. Nontraditional schools differ from traditional schools in several fundamental ways, warranting a distinction between the effects of racial/ethnic composition and disadvantage on exclusionary discipline for both school types. Most notably, nontraditional schools contain students who have already struggled with the traditional public school setting and have been placed in an alternative school to meet graduation requirements. These schools tend to have more behavioral and attendance problems, as well as lower performances on standardized testing. As evidenced by the descriptive statistics, nontraditional schools also tend to have higher exclusion rates, more disadvantaged students, a slightly higher proportion of minority students, and are, on average, in neighborhoods with more minority and disadvantaged residents.

The relationships between student racial and ethnic composition, disadvantage and exclusion rates in nontraditional schools differed from traditional middle and high schools in an interesting and important way. The racial and ethnic composition and disadvantage of the school and neighborhood appear to have no direct effects on exclusionary discipline in nontraditional schools, but student delinquency is a consistent predictor. In traditional schools, student delinquency did not significantly influence suspension or expulsion rates. Thus, strict forms of social control are influenced by the student racial composition and disadvantage in

traditional schools, but not in nontraditional schools. It is possible that because of the stigmas attached to these nontraditional school types and the types of students who attend these schools, they are instead viewed as a homogenous, rule-breaking or low-achieving group, regardless of race, ethnicity, or social class, and no such threat exists because there are no potential "victims" of minority or low-income student behaviors in these schools.

The contextual effects among nontraditional schools also exposed a different relationship between schools, neighborhoods, and exclusionary discipline than was found in traditional schools. Only two of the neighborhood-school contexts were moderated by the percentage of black residents; other contextual effects were based on the proportion of white and Hispanic residents. Hypothesis 5 is supported by the contextual results of nontraditional schools: nontraditional schools that have a higher proportion of black or disadvantaged students are more likely to use exclusionary discipline when the school is located in a neighborhood with a high proportion of white residents. The contrasting neighborhood setting may be more important to understanding the use of punitive discipline in nontraditional school settings, as opposed to traditional school settings, if these stigmatized students are especially prone to rejection from the outside community. By attempting to maintain or create an amicable relationship with neighboring residents, administrators of schools with students who do not represent the dominant culture of the surrounding community may increase their use of punitive discipline. Although no significant direct effects were found for the proportion of Hispanic students, there were significant results for both school types that included the proportion of Hispanic students (i.e., the neighborhood-school difference variable and the neighborhood-school interactions). In other words, the effect of the proportion of Hispanic students is sensitive to the school neighborhood, but not in the direction that this study predicted.

In most scenarios, it is not white or affluent neighborhoods that moderate the relationship between school racial/ethnic composition and disadvantage and exclusions, as hypothesized. Whether the school has a higher percentage of black students, or the neighborhood has a greater representation of black residents, the formal response is the same: increased social control. Thus, when a higher proportion of black residents and students are concentrated in an area, punitive discipline increases. For nontraditional schools, the percentage of minority students is only significant when the school neighborhood is also considered. Additionally, all except one contextual effect relates to suspension rather than expulsion rates. This is an important discovery, as it exhibits how the neighborhood setting can influence the punishment of discretionary violations. Together these findings underline the disparities found in public schools and call attention to the importance of context in discipline research.

The neighborhood crime variables were not among the primary variables of interest in this study but the results are worth noting. Some scholars have suggested that there is a spillover effect in which the social and economic conditions experienced in the neighborhood manifest in the school. If this is the case, we might expect higher suspension and expulsion rates in areas with higher crime rates. An alternative explanation might suggest that schools with internal disorder are more likely to negatively impact the neighborhood, as some studies have shown (for example, see Gerlinger & Hipp, Working Paper). Both explanations imply that crime in the neighborhood is committed, at least in part, by the same students committing school infractions. The present study finds that violent crime rates, but not property crime rates, are positively associated with the suspension rates in traditional schools, even after controlling for student delinquency. To support either explanation, one would expect the expulsion rate – not the

suspension rate – to be significantly associated with violent crime.[42] I therefore propose a third explanation. Administrators may associate neighborhood crime with student behaviors, particularly if students live in the school vicinity, such that the dangers imposed on residents are associated with the dangers present in school. As a result, administrators punish student behaviors by excluding them from school in order to maintain school order and prevent violent situations from occurring on school grounds. The violent crime rate also affects exclusions in nontraditional schools, but for expulsions and in the opposite direction. For nontraditional schools, the expulsion rate decreases as the violent crime rate increases. Again, because this is a school punishment that is used for serious offenses, the negative relationship between neighborhood crime and student violations shows that neighborhood crime and/or the fear of crime is not the driving mechanism in punitive responses to student behaviors.

Limitations and Future Directions

This study is not without limitations. As noted above, serious incident suspensions could be the result of zero tolerance policies and not reflective of serious violence or illicit drug use. Although they are more serious violations on average, it cannot be stated with complete certainty that all of these violations contributing to the rate are more "serious" in nature. It would also benefit this study to include a measure for student misbehavior that is not a proxy. However, this study reported findings similar to previous studies of racial threat that controlled for self-reported student delinquency and teacher assessments of student behaviors, suggesting that the proxy used in the present study successfully captured overall student delinquency.

[42] As a reminder, violent crime refers to select Part I offenses (i.e., aggravated assault, murder, and robbery), which are all serious crimes that would result in expulsion. In many cases, administrators can expel the student even if the offense was committed off school grounds, in which case the relationship between neighborhood violent crime and expulsion should be even more apparent.

Another limitation is that this study lacks data on school policies and teacher and administrator perspectives on school discipline. To control for the variations at the district level, I include district dummy variables. District policies tend to dictate the required exclusions for serious offenses but allow school principals to select disciplinary responses to many conduct violations on a case-by-case basis. Thus, it is possible that some schools extended their district's policies with zero tolerance at the school level. Teacher and administrator perspectives, as well as demographics, would fill the gap in our understanding of how expectations and values vary by student race, neighborhood, and school type and how this affects disciplinary practices.

CONCLUSION

This is the first study to test social reproduction and racial threat on school discipline using numerous school and neighborhood characteristics concurrently. It also incorporates nontraditional schools – a subset of particularly at-risk students – to compare these processes across school types and contexts and focuses on student and neighborhood disadvantage as important influences on school exclusion rates. The findings from this study support the guiding theories for black students as well as the notion that disadvantage affects students across multiple platforms. It is also evident that the school setting is much more influential on exclusionary discipline than the neighborhood setting, but the combination of the two settings also produces significant variation in the use of social control.

The influence of the proportion of black students on school exclusions is especially salient when the severity of the punishment is more discretionary (i.e., when administrators have more freedom to determine how to discipline a minor offense), or when the school is in an area with more black residents. Nontraditional schools are substantively different educational

settings that only experience the effects of racial threat when there are more black or disadvantaged students in neighborhoods with more white residents, and this is likely due to the stigmas attached to nontraditional schools and the students who attend them. Administrators in these schools may feel a need to respond to the demands of the community by removing misbehaving students from the area. These results reiterate the disparate impacts of exclusionary discipline on minorities and underprivileged youth and likely explain some of the achievement gap as well.

Education, as an institution, plays a unique and pivotal role in societal development, but the disciplinary methods in practice create a system of exclusion in school and beyond for those already struggling for equal footing. Authority discretion is likely a major source of racial and class disparities in school discipline, but policymakers should carefully consider the ramifications of mandatory sentencing in the criminal justice system before looking to adopt a similar model. Better yet, I encourage local educational agencies to move away from the punishment framework altogether in favor of restorative methods, which have been shown to be effective when properly instituted and over time.

Table 1.1 Number of Districts and Schools by County

	Districts	Middle	High	Nontraditional	Total Schools
Los Angeles	59	228	223	112	563
Orange	19	58	43	16	117
Riverside	16	41	27	32	100
San Bernardino	7	12	4	5	21
San Diego	23	75	73	37	185
Ventura	1	3	3	2	8
Total:	**125**	**417 (42.0%)**	**373 (37.5%)**	**204 (21.5%)**	**994 (100%)**

Table 1.2 Exclusion Rates per 100 Students by School Type

	Minor Incident Suspension	Serious Incident Suspension	Expulsion
Middle	8.98	8.13	0.32
High	6.19	4.49	0.32
Nontraditional	18.79	9.70	0.96

Table 1.3 Descriptive Statistics

	Traditional		Nontraditional	
Variable	*Mean*	*SD*	*Mean*	*SD*
Exclusions (per 100 Students)				
Minor Incident Suspension Rate	7.74	10.68	18.79	36.25
Serious Incident Suspension Rate	6.51	6.54	9.70	17.77
Expulsion Rate	0.32	0.56	0.96	2.56
School Characteristics				
Academic Performance Index	706.58	99.01	561.1	125.23
Percent Black	9.92	14.20	12.38	14.70
Percent Hispanic	56.69	27.63	60.90	23.95
SES Disadvantage	0.12	1.04	0.28	0.83
Enrollment	1585.42	1019.08	306.68	334.31
Middle	0.55	0.50	--	--
High	0.45	0.50	--	--
School Delinquency	25.61	25.23	45.85	54.23
Neighborhood Characteristics: 0.25-Mile Spatial Buffer				
Racial/Ethnic Heterogeneity	0.48	0.16	0.48	0.17
Percent Black	7.75	13.19	7.62	11.90
Percent Hispanic	43.12	27.54	47.41	26.31
Percent White	34.60	27.51	32.28	25.77
Occupied Housing	99.95	0.04	99.94	0.07
Percent Ages 5 to 14	14.18	4.27	13.84	5.11
Percent Ages 15 to 19	7.75	2.81	7.68	3.53
Population	129.09	94.55	130.79	113.73
Disadvantage	0.35	9.44	2.30	8.20
Residential Stability	0.13	0.52	0.01	0.53
Property Crime Rate (per 10)	9.56	234.9	7.00	69.87
Violent Crime Rate (per 10)	0.56	6.47	1.15	11.19
Neighborhood/School Difference				
Percent Black	-2.17	9.04	-4.75	9.46
Percent Hispanic	-13.57	18.10	-13.49	23.28
Disadvantage	0.22	8.81	2.02	7.89

NOTE: Traditional schools, *N*=790; Nontraditional schools, *N*=204. SES Disadvantage, disadvantage, and residential stability are factor scores. Neighborhood/School difference variables are created by subtracting school variables from neighborhood variables.

Table 1.4 Fixed Effects Models Predicting Minor Incident Suspension Rate

	M(1)						M(2)						M(3)					
	Traditional			Nontraditional			Traditional		Nontraditional				Traditional			Nontraditional		
	b (SE)	Beta		*b* (SE)	Beta		*b* (SE)	Beta	*b* (SE)	Beta			*b* (SE)	Beta		*b* (SE)	Beta	
School Characteristics																		
Percent Black	0.200	0.153	**	0.172	0.132								0.201	0.154	**	-0.061	-0.047	
	(0.067)			(0.236)									(0.065)			(0.289)		
Percent Black Squared	-0.001	-0.082	*	-0.000	-0.014								-0.002	-0.091	*	0.003	0.155	
	(0.001)			(0.003)									(0.001)			(0.004)		
Percent Hispanic	-0.043	-0.062		0.211	0.305								-0.071	-0.102		0.338	0.488	
	(0.062)			(0.264)									(0.070)			(0.294)		
Percent Hispanic Squared	0.000	0.061		-0.003	-0.424								0.000	0.075		-0.003	-0.455	
	(0.000)			(0.002)									(0.001)			(0.002)		
SES Disadvantage	1.259	0.067	*	-1.110	-0.059								0.892	0.048		-1.472	-0.079	
	(0.552)			(2.930)									(0.516)			(2.632)		
Academic Performance Index	-0.019	-0.120	***	-0.052	-0.331	***							-0.021	-0.132	***	-0.038	-0.240	**
	(0.006)			(0.013)									(0.006)			(0.012)		
Enrollment (logged)	1.674	0.090	***	-2.069	-0.111								1.646	0.089	***	-2.920	-0.157	
	(0.455)			(1.706)									(0.422)			(1.754)		
School Type[a]	-3.563	-0.092	***	40.288	0.830	**							-3.599	-0.093	***	-4276.191	-88.147	
	(0.527)			(12.719)									(0.531)			(3565.401)		
Student Delinquency	-0.001	-0.002		0.177	0.317	***							0.003	0.005		0.163	0.290	***
	(0.013)			(0.034)									(0.013)			(0.033)		
Neighborhood Characteristics: 0.25-Mile Spatial Buffer																		
Percent Black							0.062	0.043	-0.059	-0.041			--	--		--	--	
							(0.033)		(0.103)									
Percent Hispanic							0.005	0.007	-0.083	-0.121			--	--		--	--	
							(0.029)		(0.111)									
Disadvantage							0.039	0.019	0.358	0.177			--	--		--	--	
							(0.073)		(0.327)									
Racial/Ethnic Heterogeneity							-2.881	-0.025	6.999	0.061			-2.555	-0.022		4.204	0.037	
							(2.532)		(9.034)				(2.269)			(8.802)		
Percent Occupied Housing							12.172	0.029	12.385	0.030			-5.543	-0.013		36.995	0.088	
							(18.326)		(18.428)				(8.558)			(37.801)		
Percent Ages 5 to 14							0.005	0.001	1.405	0.333	**		0.014	0.003		1.166	0.276	**
							(0.101)		(0.530)				(0.090)			(0.435)		
Percent Ages 15 to 19							-0.034	-0.005	-0.492	-0.078			0.062	0.010		-0.605	-0.095	
							(0.142)		(0.610)				(0.127)			(0.619)		
Population (logged)							0.982	0.042	-5.556	-0.235			0.687	0.029		-5.393	-0.228	
							(0.532)		(3.149)				(0.466)			(2.763)		
Residential Stability							-0.723	-0.020	0.847	0.024			-0.737	-0.021		-1.023	-0.029	
							(1.060)		(4.823)				(0.810)			(4.712)		
Property Crime Rate							0.002	0.018	-0.010	-0.112			-0.000	-0.002		-0.001	-0.007	
							(0.001)		(0.010)				(0.001)			(0.015)		
Violent Crime Rate							-0.006	-0.002	-0.076	-0.031			0.031	0.012	*	-0.037	-0.015	
							(0.026)		(0.043)				(0.013)			(0.042)		

Neighborhood-School Difference							
Percent Black				-0.037	-0.018	-0.434	-0.213
				(0.037)		(0.233)	
Percent Hispanic				-0.048	-0.049	0.014	0.015
				(0.030)		(0.097)	
Disadvantage				0.009	0.004	0.064	0.030
				(0.062)		(0.281)	
Constant	7.703		-1218.138	561.443			
	(6.771)		(1832.171)	(854.229)			
R-Squared	0.405		0.342	0.425			

NOTE: N = 4,839 school-year observations. Dummy variables for year and school district are included in the models but not displayed. Standard errors displayed in parentheses. * p < .05, ** p < .01, *** p <.001

[a] Traditional middle schools are the reference category under the traditional school column; all traditional schools are the reference category for nontraditional schools.

Table 1.5 Fixed Effects Models Predicting Serious Incident Suspension Rate

	M(1)						M(2)						M(3)					
	Traditional			Nontraditional			Traditional			Nontraditional			Traditional			Nontraditional		
	b (SE)	Beta		*b* (SE)	Beta		*b* (SE)	Beta		*b* (SE)	Beta		*b* (SE)	Beta		*b* (SE)	Beta	
School Characteristics																		
Percent Black	0.121	0.179	*	0.083	0.122								0.144	0.212	**	0.028	0.041	
	(0.050)			(0.129)									(0.050)			(0.157)		
Percent Black Squared	-0.001	-0.093		-0.001	-0.066								-0.001	-0.132	*	0.001	0.055	
	(0.000)			(0.002)									(0.000)			(0.002)		
Percent Hispanic	0.011	0.032		0.074	0.208								-0.034	-0.095		0.270	0.754	
	(0.041)			(0.129)									(0.046)			(0.164)		
Percent Hispanic Squared	-0.000	-0.133		-0.001	-0.295								-0.000	-0.035		-0.002	-0.527	
	(0.000)			(0.001)									(0.000)			(0.001)		
SES Disadvantage	0.955	0.099	*	0.764	0.079								0.783	0.081	*	0.681	0.070	
	(0.380)			(1.657)									(0.358)			(1.565)		
Academic Performance Index	-0.023	-0.284	***	-0.023	-0.286	***							-0.024	-0.289	***	-0.019	-0.234	***
	(0.006)			(0.006)									(0.006)			(0.006)		
Enrollment (logged)	1.016	0.106	*	-0.432	-0.045								0.958	0.099	*	-1.212	-0.126	
	(0.446)			(0.738)									(0.424)			(0.875)		
School Type[a]	-4.643	-0.231	***	7.769	0.309								-4.637	-0.230	***	-1357.419	-54.058	
	(0.341)			(9.544)									(0.342)			(1788.372)		
Student Delinquency	0.011	0.039		0.091	0.314	***							0.011	0.040		0.086	0.295	***
	(0.008)			(0.016)									(0.008)			(0.016)		
Neighborhood Characteristics: 0.25-Mile Spatial Buffer																		
Percent Black							0.056	0.075	*	-0.010	-0.014		--	--		--	--	
							(0.028)			(0.047)								
Percent Hispanic							-0.007	-0.020		0.066	0.186		--	--		--	--	
							(0.019)			(0.056)								
Disadvantage							0.083	0.080		-0.139	-0.133		--	--		--	--	
							(0.050)			(0.171)								
Racial/Ethnic Heterogeneity							-1.204	-0.020		0.934	0.016		-1.508	-0.025		-1.159	-0.020	
							(1.447)			(5.106)			(1.193)			(5.005)		
Percent Occupied Housing							6.828	0.031		6.950	0.032		1.935	0.009		14.795	0.068	
							(10.424)			(10.464)			(6.514)			(18.488)		
Percent Ages 5 to 14							-0.081	-0.037		0.502	0.230	*	-0.116	-0.053	**	0.371	0.170	
							(0.053)			(0.245)			(0.043)			(0.191)		
Percent Ages 15 to 19							0.006	0.002		-0.203	-0.062		0.077	0.023		-0.235	-0.072	
							(0.099)			(0.294)			(0.083)			(0.285)		
Population (logged)							0.984	0.080	**	-3.406	-0.278	*	0.623	0.051	*	-3.192	-0.261	*
							(0.358)			(1.527)			(0.267)			(1.356)		
Residential Stability							0.721	0.039		-0.511	-0.028		0.358	0.019		-1.228	-0.066	
							(0.573)			(2.460)			(0.444)			(2.433)		
Property Crime Rate							0.002	0.042	**	0.009	0.199		0.000	0.006		0.011	0.246	
							(0.000)			(0.007)			(0.001)			(0.010)		
Violent Crime Rate							-0.006	-0.005		0.004	0.003		0.026	0.020	**	0.021	0.016	
							(0.002)			(0.018)			(0.009)			(0.015)		

Neighborhood-School Difference									
Percent Black					-0.020	-0.019	-0.148	-0.140	
					(0.029)		(0.113)		
Percent Hispanic					-0.033	-0.066	0.107	0.211	*
					(0.018)		(0.054)		
Disadvantage					0.050	0.045	-0.301	-0.270	*
					(0.040)		(0.153)		
Constant	16.988	*	-680.689		-175.616				
	(7.428)		(1042.370)		(652.342)				
R-Squared	0.374		0.272		0.398				

NOTE: N = 4,839 school-year observations. Dummy variables for year and school district are included in the models but not displayed. Standard errors displayed in parentheses.
* p < .05, ** p < .01, *** p <.001
[a] Traditional middle schools are the reference category under the traditional school column; all traditional schools are the reference category for nontraditional schools.

Table 1.6 Fixed Effects Models Predicting Expulsion Rate

	M(1)					M(2)					M(3)				
	Traditional		Nontraditional			Traditional		Nontraditional			Traditional		Nontraditional		
	b (SE)	Beta	*b* (SE)	Beta		*b* (SE)	Beta	*b* (SE)	Beta		*b* (SE)	Beta	*b* (SE)	Beta	
School Characteristics															
Percent Black	-0.004	-0.042	0.006	0.064							-0.006	-0.068	0.012	0.134	
	(0.004)		(0.020)								(0.004)		(0.022)		
Percent Black Squared	0.000	0.063	-0.000	-0.256							0.000	0.066	-0.000	-0.198	
	(0.000)		(0.000)								(0.000)		(0.000)		
Percent Hispanic	0.008	0.167	-0.030	-0.671							0.003	0.070	-0.007	-0.152	
	(0.006)		(0.035)								(0.006)		(0.041)		
Percent Hispanic Squared	-0.000	-0.165	0.000	0.232							-0.000	-0.123	-0.000	-0.088	
	(0.000)		(0.000)								(0.000)		(0.000)		
SES Disadvantage	0.114	0.093	0.314	0.256							0.089	0.072	0.128	0.104	
	(0.042)		(0.390)								(0.040)		(0.318)		
Academic Performance Index	-0.000	-0.007	-0.003	-0.331	***						-0.000	-0.037	-0.003	-0.254	**
	(0.000)		(0.001)								(0.000)		(0.001)		
Enrollment (logged)	0.026	0.022	0.236	0.194							0.026	0.022	0.067	0.055	
	(0.034)		(0.142)								(0.030)		(0.127)		
School Type[a]	-0.007	-0.003	2.573	0.808							-0.006	-0.002	-75.930	-23.859	
	(0.037)		(1.470)								(0.036)		(348.408)		
Student Delinquency	-0.000	-0.009	0.011	0.296	***						-0.000	-0.004	0.010	0.267	***
	(0.001)		(0.003)								(0.001)		(0.003)		
Neighborhood Characteristics: 0.25-Mile Spatial Buffer															
Percent Black						-0.001	-0.011	-0.007	-0.072		--	--	--	--	
						(0.002)		(0.006)							
Percent Hispanic						-0.002	-0.034	-0.008	-0.179		--	--	--	--	
						(0.002)		(0.011)							
Disadvantage						0.004	0.027	-0.017	-0.132		--	--	--	--	
						(0.005)		(0.027)							
Racial/Ethnic Heterogeneity						-0.027	-0.004	-1.501	-0.200		-0.046	-0.006	-1.892	-0.252	
						(0.140)		(1.079)			(0.121)		(1.051)		
Percent Occupied Housing						0.190	0.007	0.223	0.008		-0.058	-0.002	0.743	0.027	
						(1.617)		(1.619)			(0.731)		(3.679)		
Percent Ages 5 to 14						0.006	0.021	0.167	0.604	*	0.010	0.036	0.144*	0.520	*
						(0.009)		(0.079)			(0.008)		(0.073)		
Percent Ages 15 to 19						-0.009	-0.021	-0.069	-0.166		-0.002	-0.006	-0.069	-0.166	
						(0.010)		(0.054)			(0.008)		(0.055)		
Population (logged)						0.041	0.026	-0.691	-0.445	*	0.033	0.021	-0.628*	-0.405	*
						(0.039)		(0.291)			(0.035)		(0.271)		
Residential Stability						-0.072	-0.031	-0.630	-0.267		-0.083	-0.035	-0.625	-0.265	
						(0.074)		(0.411)			(0.061)		(0.418)		
Property Crime Rate						0.000	0.021	0.003	0.546	*	0.000	0.010	0.003	0.525	
						(0.000)		(0.002)			(0.000)		(0.002)		
Violent Crime Rate						0.002	0.014	-0.017	-0.103	***	0.004	0.025	-0.016	-0.097	***
						(0.003)		(0.003)			(0.003)		(0.003)		

Neighborhood-School Difference							
Percent Black			-0.003	-0.021	-0.008	-0.059	
			(0.002)		(0.014)		
Percent Hispanic			-0.004	-0.058	*	-0.004	-0.068
			(0.002)		(0.011)		
Disadvantage			-0.000	-0.003	-0.040	-0.281	
			(0.005)		(0.029)		
Constant	0.082	-19.013	5.979				
	(0.525)	(161.641)	(73.152)				
R-Squared	0.312	0.312	0.363				

NOTE: N = 4,839 school-year observations. Dummy variables for year and school district are included in the models but not displayed. Standard errors displayed in parentheses.
* p < .05, ** p < .01, *** p <.001
[a] Traditional middle schools are the reference category under the traditional school column; all traditional schools are the reference category for nontraditional schools.

Table 1.7 Contingent Relationships between Schools, Neighborhoods, and Discipline (Interaction Effects Only)

	Minor Incident			Serious Incident			Expulsion		
	b		SE	*b*		SE	*b*		SE
School x Neighborhood Interactions									
1. Percent Black × Percent Black	(1a)			(1b)			(1c)		
Traditional Schools	-0.001		(0.001)	-0.001		(0.001)	0.000	*	(0.000)
Nontraditional Schools	0.002		(0.003)	0.001		(0.002)	0.000		(0.000)
2. Percent Black × Percent White	(2a)			(2b)			(2c)		
Traditional Schools	0.000		(0.001)	-0.000		(0.001)	-0.000		(0.000)
Nontraditional Schools	0.006	*	(0.003)	0.005	**	(0.002)	0.000		(0.000)
3. Percent Black × Percent Hispanic	(3a)			(3b)			(3c)		
Traditional Schools	0.000		(0.001)	0.001		(0.001)	-0.000		(0.000)
Nontraditional Schools	0.001		(0.004)	-0.002		(0.001)	-0.000		(0.000)
4. Percent Black × Disadvantaged	(4a)			(4b)			(4c)		
Traditional Schools	-0.000		(0.002)	0.002		(0.002)	0.000		(0.000)
Nontraditional Schools	-0.002		(0.010)	-0.006		(0.004)	-0.001		(0.001)
5. Percent Hispanic × Percent Black	(5a)			(5b)			(5c)		
Traditional Schools	0.001		(0.001)	0.001		(0.000)	-0.000	*	(0.000)
Nontraditional Schools	-0.007	*	(0.003)	-0.003		(0.002)	-0.000		(0.000)
6. Percent Hispanic × Percent White	(6a)			(6b)			(6c)		
Traditional Schools	-0.000		(0.001)	-0.000		(0.000)	0.000		(0.000)
Nontraditional Schools	-0.002		(0.002)	0.001		(0.001)	-0.000		(0.000)
7. Percent Hispanic × Percent Hispanic	(7a)			(7b)			(7c)		
Traditional Schools	0.000		(0.001)	-0.000		(0.000)	-0.000		(0.000)
Nontraditional Schools	0.000		(0.002)	-0.001		(0.001)	0.000		(0.000)
8. Percent Hispanic × Disadvantaged	(8a)			(8b)			(8c)		
Traditional Schools	0.001		(0.001)	-0.001		(0.001)	-0.000		(0.000)
Nontraditional Schools	-0.002		(0.006)	-0.002		(0.003)	0.001		(0.001)
9. Disadvantaged × Percent Black	(9a)			(9b)			(9c)		
Traditional Schools	0.028		(0.015)	0.044	***	(0.013)	-0.001		(0.001)
Nontraditional Schools	-0.193		(0.127)	-0.134	*	(0.055)	-0.011		(0.008)

10. Disadvantaged × Percent White	(10a)		(10b)		(10c)	
Traditional Schools	-0.003	(0.012)	-0.010	(0.009)	0.001	(0.001)
Nontraditional Schools	0.017	(0.050)	0.083 **	(0.026)	0.007	(0.006)
11. Disadvantaged × Percent Hispanic	(11a)		(11b)		(11c)	
Traditional Schools	-0.005	(0.012)	-0.004	(0.011)	0.001	(0.001)
Nontraditional Schools	-0.003	(0.048)	-0.058 *	(0.027)	-0.008	(0.006)
12. Disadvantaged × Disadvantaged	(12a)		(12b)		(12c)	
Traditional Schools	0.015	(0.027)	0.007	(0.021)	-0.000	(0.002)
Nontraditional Schools	-0.126	(0.171)	-0.138	(0.078)	-0.010	(0.018)

NOTE: N = 4,839 school-year observations. Table contains 36 separate OLS regression models per school type. All variables in Tables 4-9 are

Figure 1.1 Predicted Values Regressing Minor Incident Suspension Rates on School Percent Black (Traditional Schools)

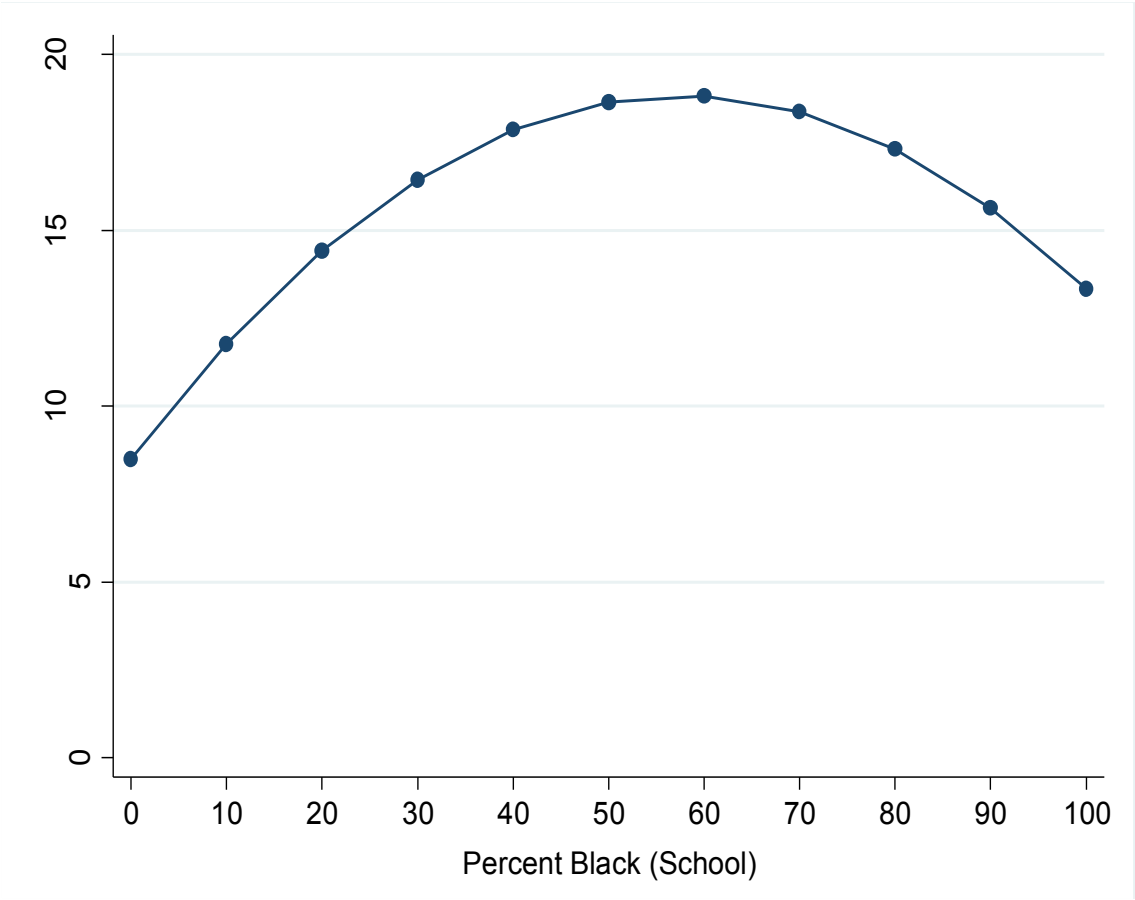


Figure 1.2 Scatterplot of Percent Black and
Minor Incident Suspension Rate, Observed Values

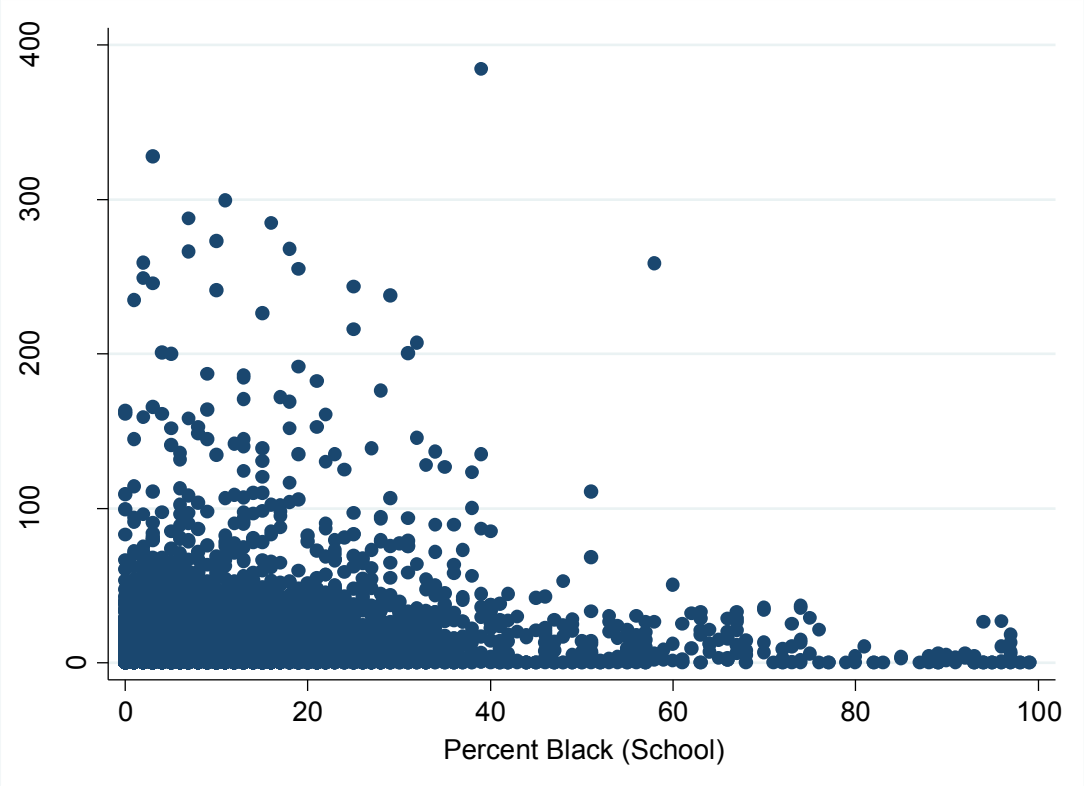


Figure 1.3 Scatterplot of Percent Hispanic and
Minor Incident Suspension Rate, Observed Values

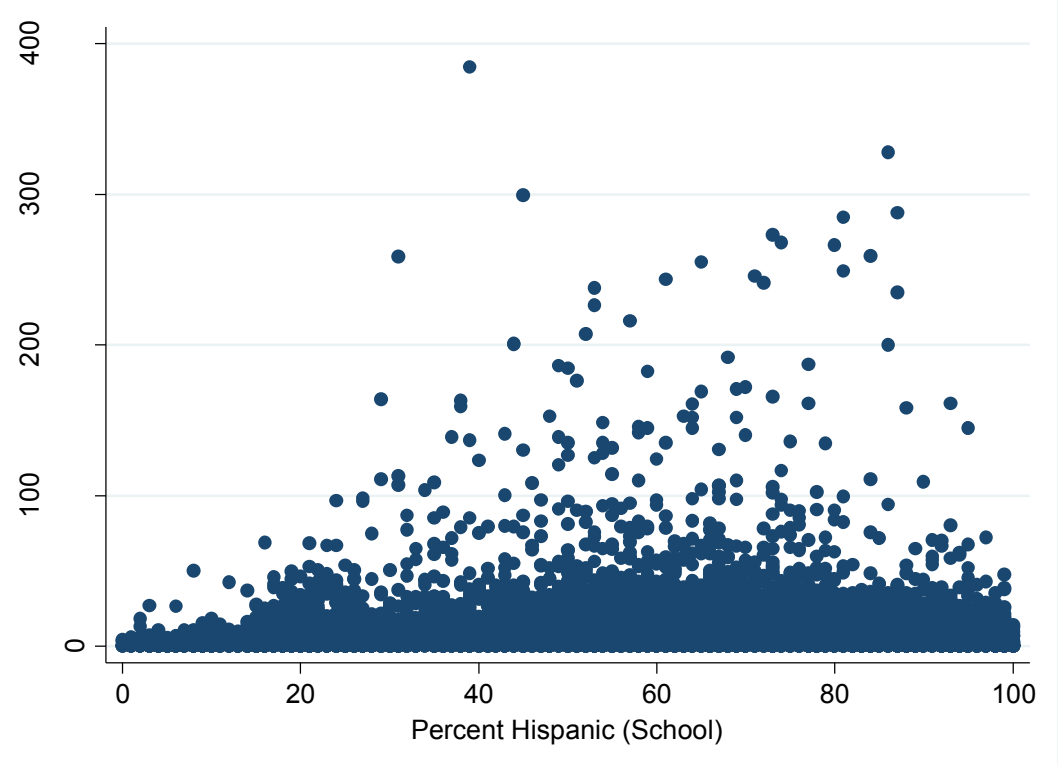


Figure 1.4 Secondary Schools in Southern California with an Example of School Neighborhood (0.25-Mile Spatial Buffer)

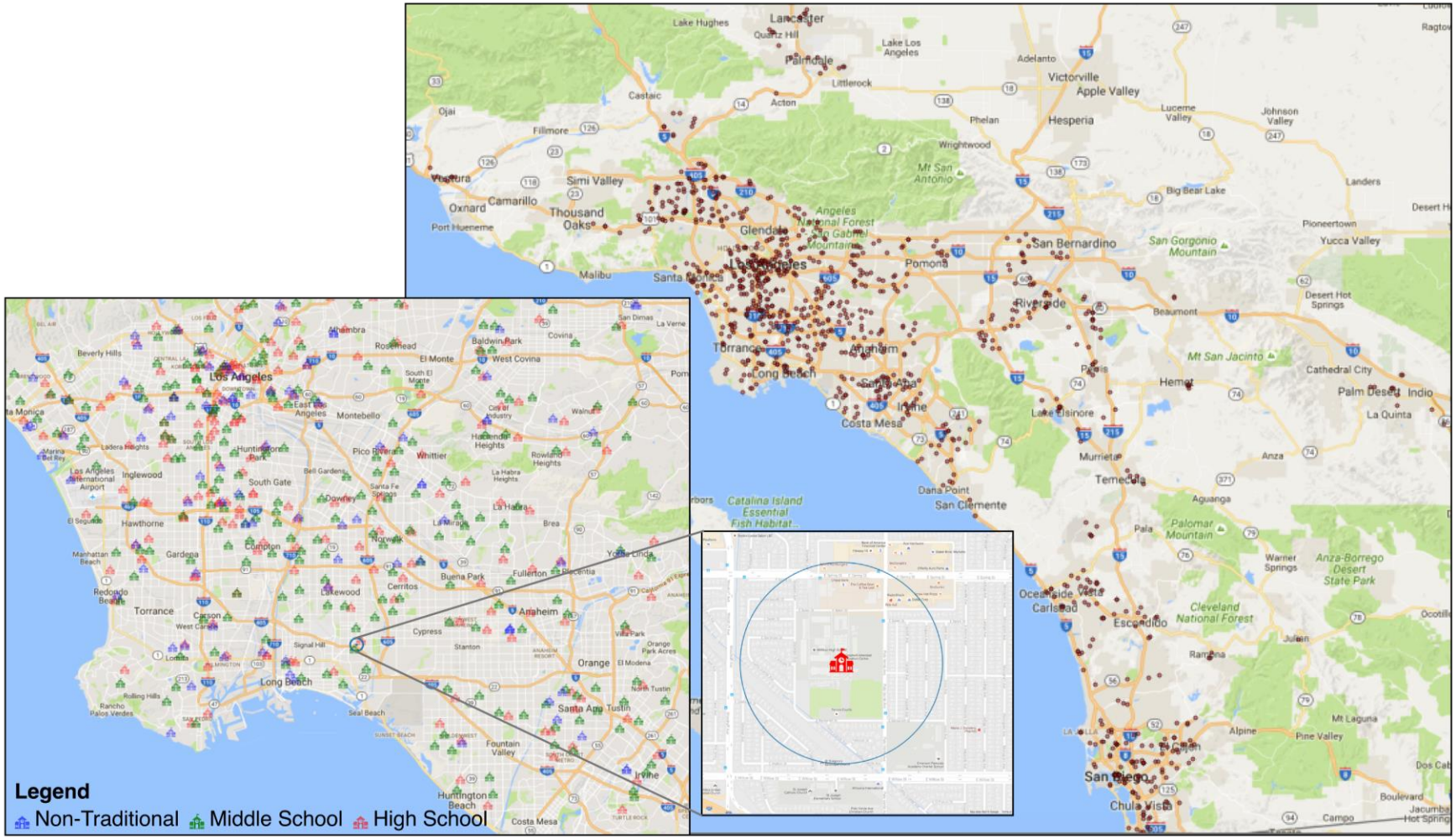
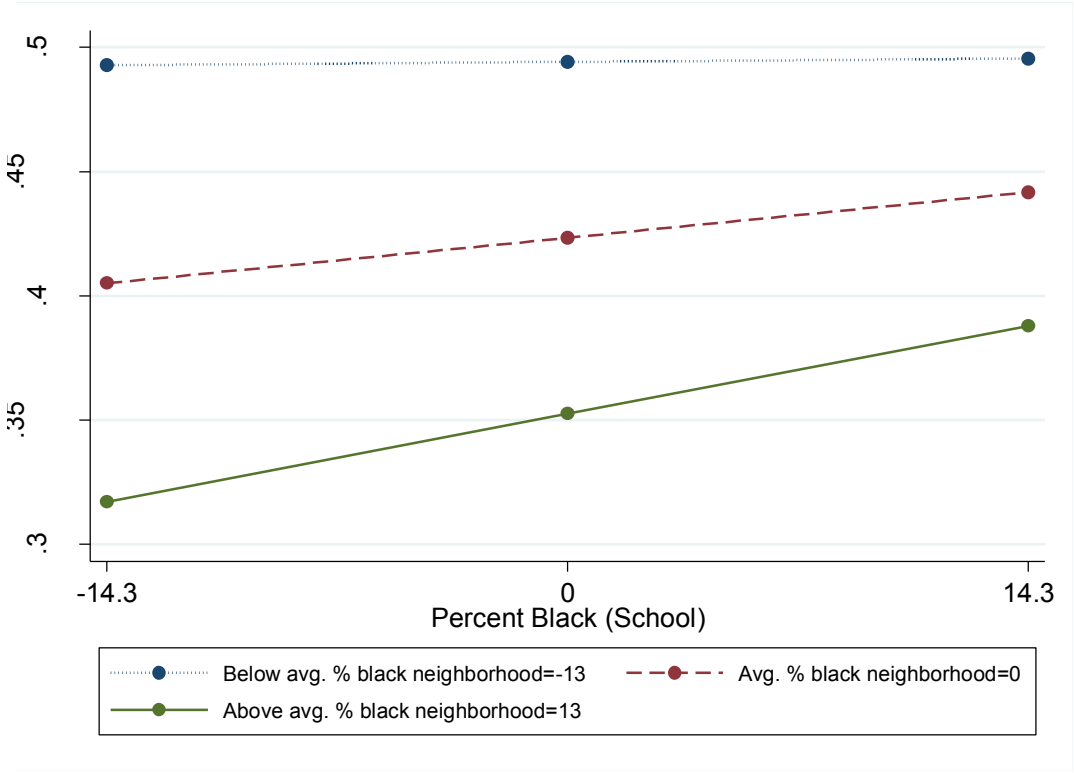
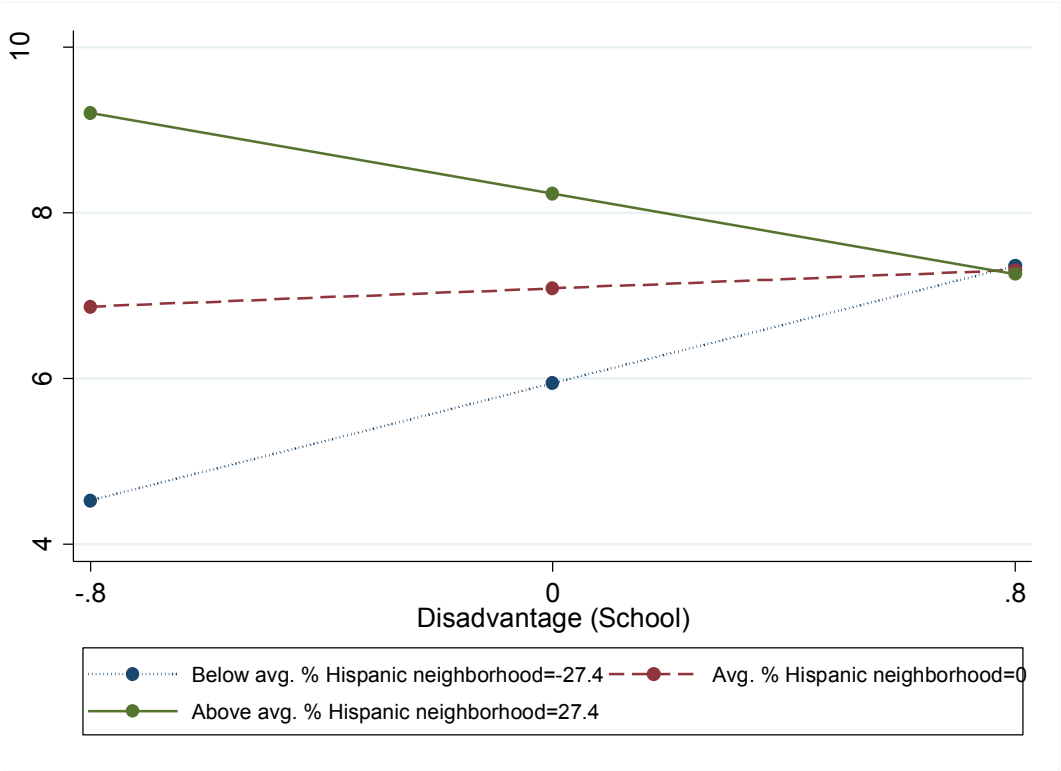


Figure 1.5 Effect of Black Student Population on Expulsion Rates, Moderated by Proportion of Black Residents in Surrounding Neighborhood (Traditional Middle and High Schools)



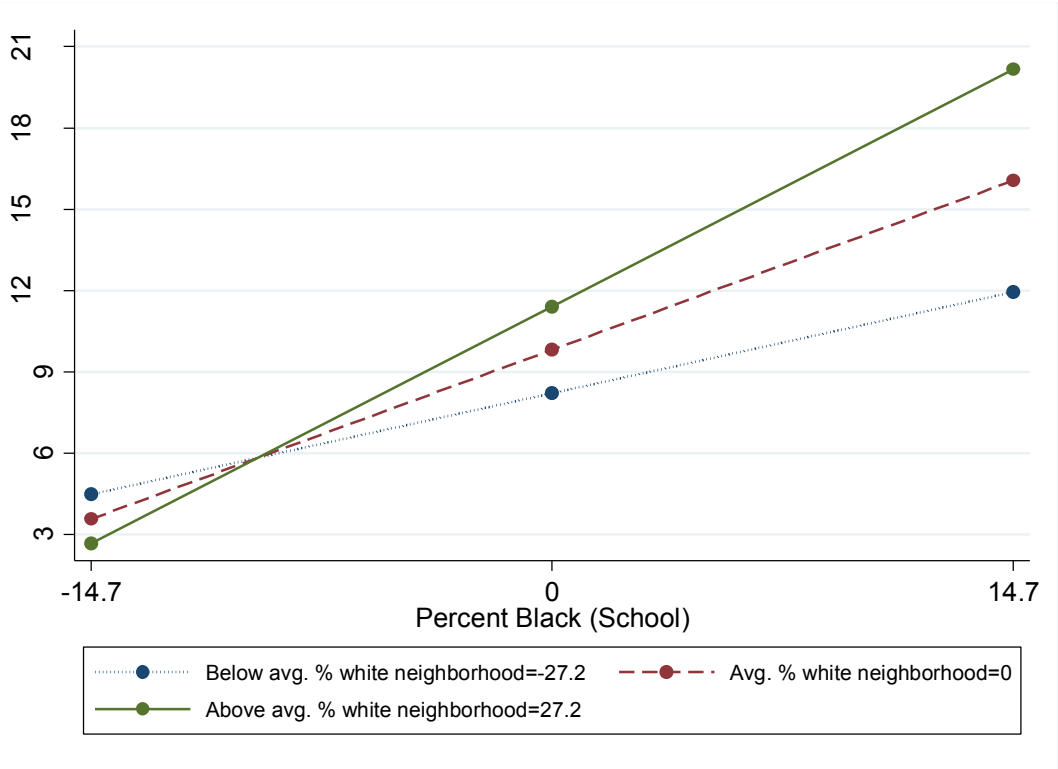
Note: Figure displays one standard deviation above and below the mean for percent black (school) and percent black (neighborhood). The averages are set to 0 because variables are mean-centered.

Figure 1.6 Effect of Disadvantaged Students on Serious Incident Suspension Rates, Moderated by Proportion of Hispanic Residents in Surrounding Neighborhood (Nontraditional Secondary Schools)



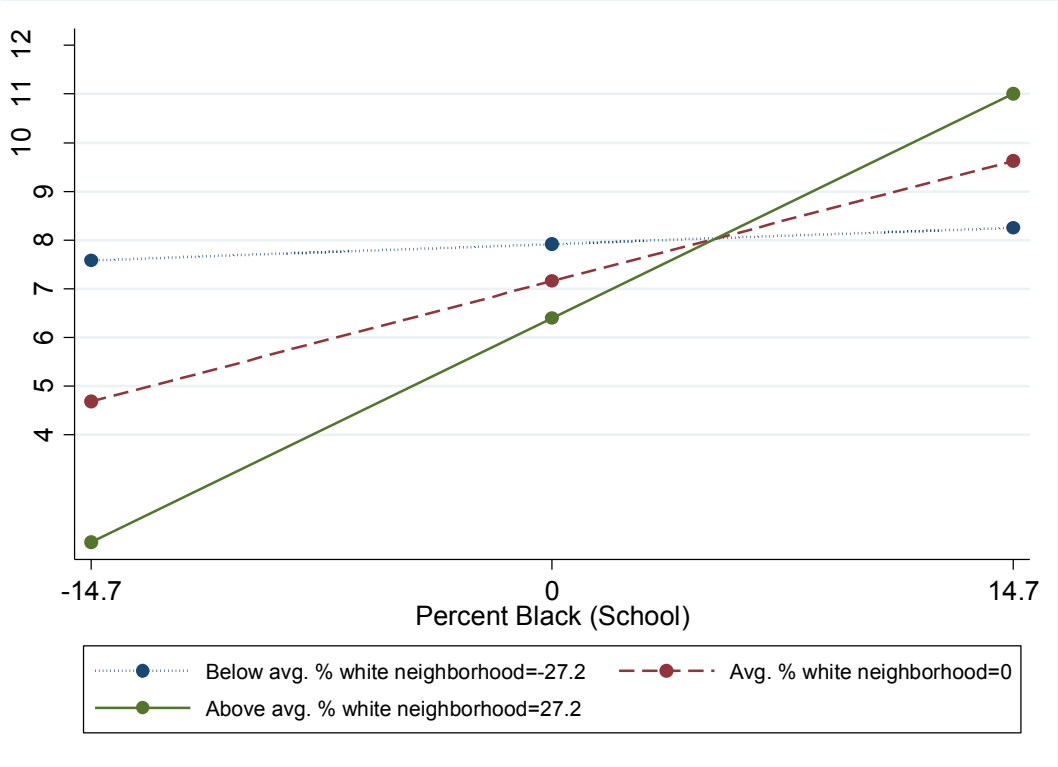
Note: Figure displays one standard deviation above and below the mean for proportion of disadvantaged students (school) and percent Hispanic (neighborhood). The averages are set to 0 because variables are mean-centered.

Figure 1.7 Effect of Black Student Population on Minor Incident Suspension Rates, Moderated by Proportion of White Residents in Surrounding Neighborhood (Nontraditional Secondary Schools)



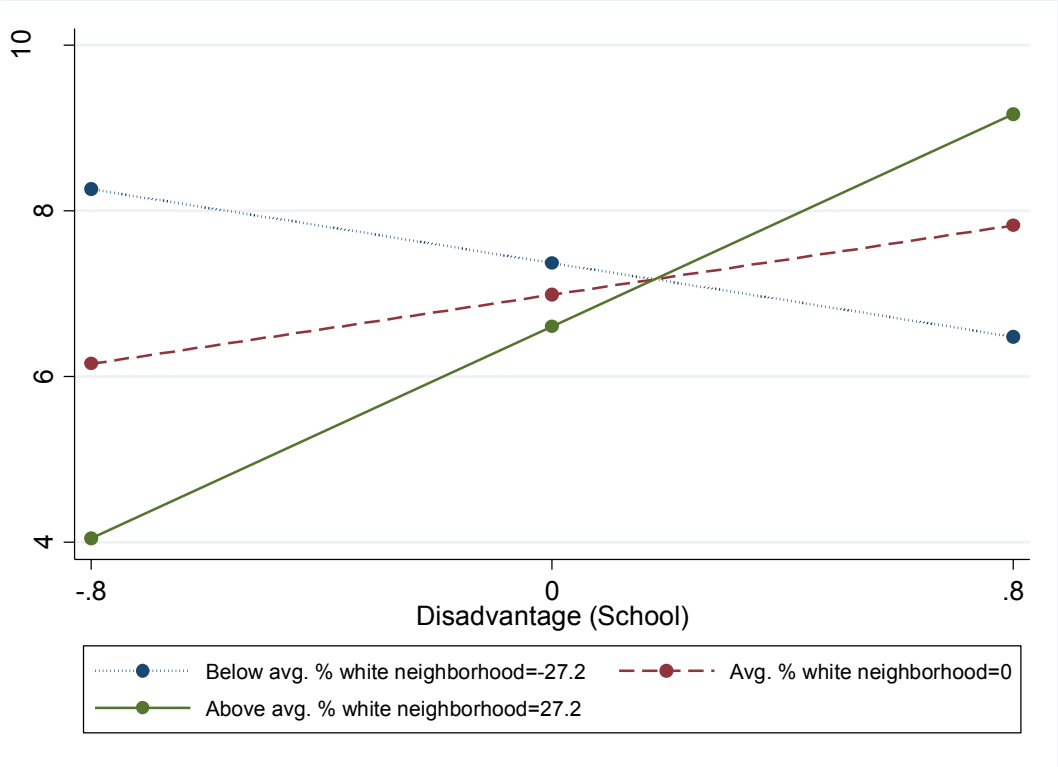
Note: Figure displays one standard deviation above and below the mean for percent black (school) and percent white (neighborhood). The averages are set to 0 because variables are mean-centered.

Figure 1.8 Effect of Black Student Population on Serious Incident Suspension Rates, Moderated by Proportion of White Residents in Surrounding Neighborhood (Nontraditional Secondary Schools)



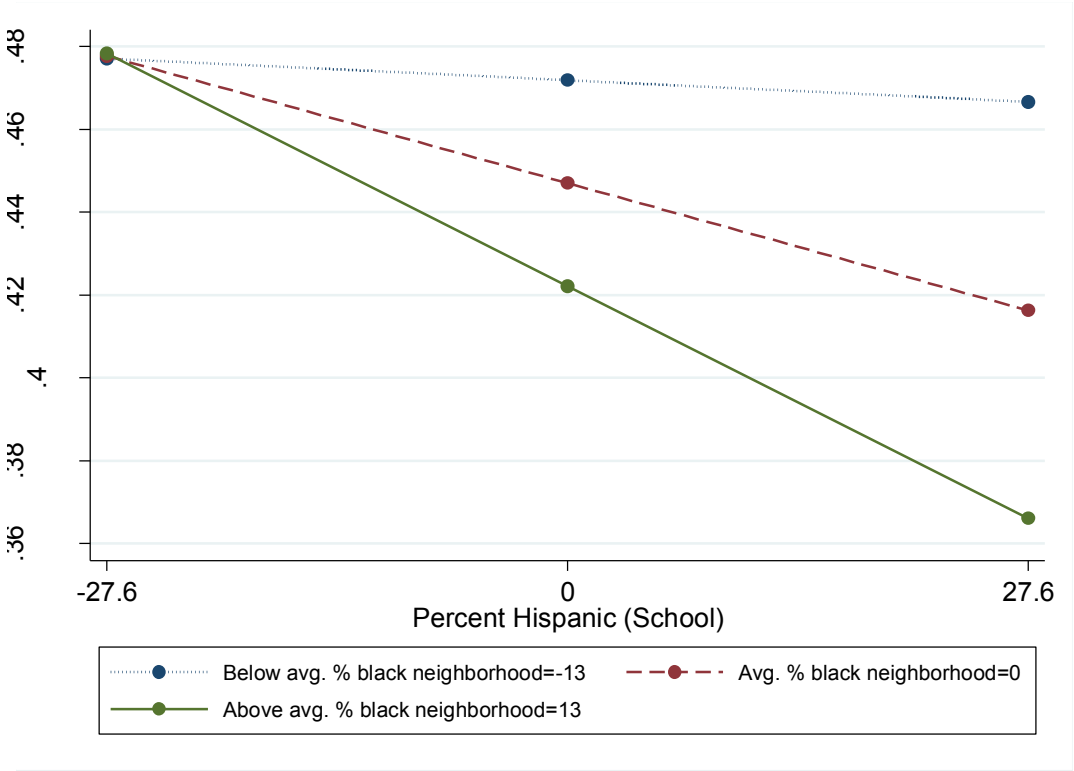
Note: Figure displays one standard deviation above and below the mean for percent black (school) and percent white (neighborhood). The averages are set to 0 because variables are mean-centered.

Figure 1.9 Effect of Student Disadvantage on Serious Incident Suspension Rates, Moderated by Proportion of White Residents in Surrounding Neighborhood (Nontraditional Secondary Schools)



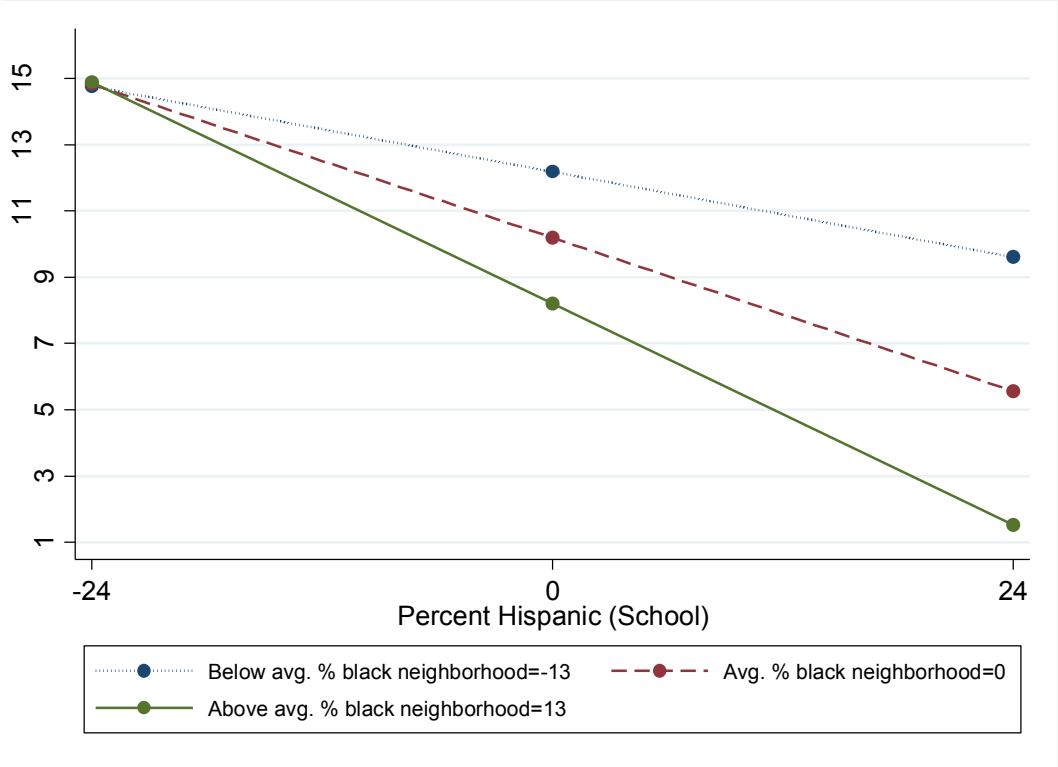
Note: Figure displays one standard deviation above and below the mean for SES disadvantage (school) and percent white (neighborhood). The averages are set to 0 because variables are mean-centered.

Figure 1.10 Effect of Hispanic Student Population on Expulsion Rates, Moderated by Proportion of Black Residents in Surrounding Neighborhood (Traditional Middle and High Schools)



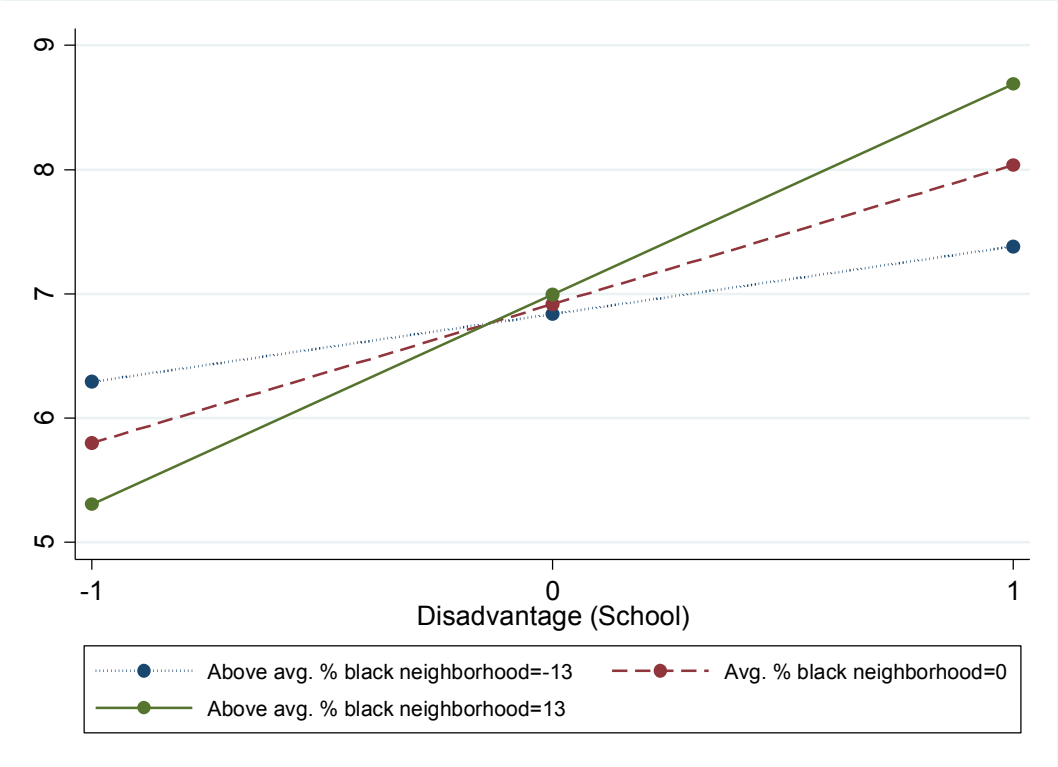
Note: Figure displays one standard deviation above and below the mean for percent Hispanic (school) and percent black (neighborhood). The averages are set to 0 because variables are mean-centered.

Figure 1.11 Effect of Hispanic Student Population on Minor Incident Suspension Rates, Moderated by Proportion of Black Residents in Surrounding Neighborhood (Nontraditional Secondary Schools)



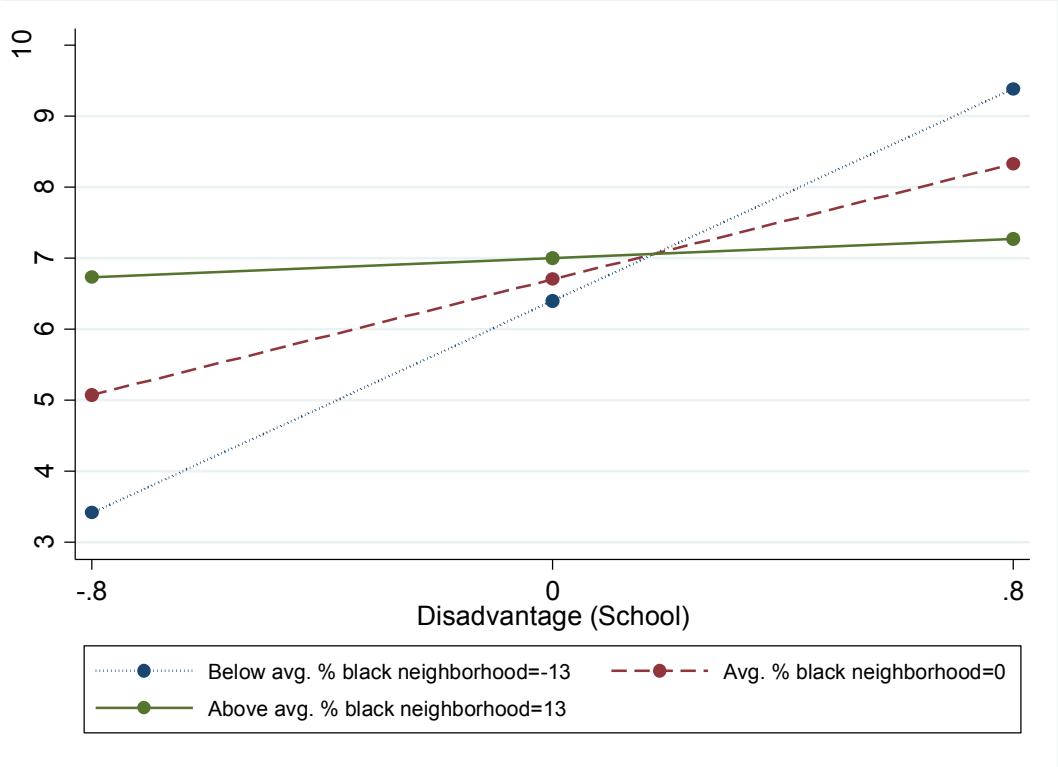
Note: Figure displays one standard deviation above and below the mean for percent Hispanic (school) and percent black (neighborhood). The averages are set to 0 because variables are mean-centered.

Figure 1.12 Effect of Student Disadvantage on Serious Incident Suspension Rates, Moderated by Proportion of Black Residents in Surrounding Neighborhood (Traditional Middle and High Schools)



Note: Figure displays one standard deviation above and below the mean for SES disadvantage (school) and percent black (neighborhood). The averages are set to 0 because variables are mean-centered.

Figure 1.13 Effect of Student Disadvantage on Serious Incident Suspension Rates, Moderated by Proportion of Black Residents in Surrounding Neighborhood (Nontraditional Secondary Schools)



Note: Figure displays one standard deviation above and below the mean for SES disadvantage (school) and percent black (neighborhood). The averages are set to 0 because variables are mean-centered

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CHAPTER TWO
The Effect of School Exclusions on Neighborhood Crime

Scholars have long been interested in the dynamic relationship between schools and their communities. Just as the neighborhood in which the school is located can influence institutional processes of the local school, so too can school practices impact the neighborhood. This chapter now turns to the other side of the bidirectional nature of school exclusions and communities by investigating the following question: Do school exclusions affect neighborhood crime?

The premise of the school-to-prison pipeline is that removing students from school and the formal social control it provides results in increased delinquency and crime – the opposite of its intended effect. Students who have been removed from the education system – either temporarily or permanently – are also removed from important forms of bonding and development. The current practice of denying educational services to students who are, in large part, misbehaving in class disrupts their academic success and puts them on a path towards dropping out. Longitudinal analyses of exclusions and deviant behaviors have found that students who are suspended or expelled are more likely to drop out of school and have future involvement with the juvenile or criminal justice system (Fabelo et al., 2011; Shollenberger, 2015). Furthermore, one study found no differences between racial or gender groups in the effect of exclusions on arrest, meaning the consequence of increased likelihood of arrest appears to apply to all students (Monahan, VanDerhei, Bechtold, & Cauffman, 2014). Accordingly, the overrepresentation of black student suspensions leads to an overrepresentation in black juvenile court referrals (Nicholson-Crotty, Birchmeier, & Valentine, 2009).

At present date, no study has assessed the impact of exclusionary discipline on local crime. Only one study has used characteristics of the school to explore their effects on crime

using the census block as the unit of analysis (Gerlinger & Hipp, 2017). This small geographic unit allows for analyses with precise locations of crime, making the observed link between schools and local crime more reliable. There are a handful of studies that have examined the impact of the presence of schools on crime, but these often do not account for variable characteristics of the school itself.[43] This study tests the school-to-prison pipeline argument by assessing the effect of suspensions and expulsions on neighborhood crime using census blocks as the unit of analysis.

Theoretical Considerations of the School and Delinquency

Social adjustment refers to the "effort made by an individual to cope with standards, values and needs of a society in order to be accepted" (Jain, 2011). One of the primary socializing agencies for children and adolescents is the school, and research has shown a positive relationship between social adjustment and academic achievement (Bano & Naseer, 2014). For some children, school might be the only resource from which they can learn socially acceptable behaviors and mores. As such, the importance of school reaches far beyond educational attainment alone. It is a fundamental institution for social and developmental processes.

Some influential theories of crime explicitly point to the role of school in shaping youth attitudes and behaviors. School bonding is a strong predictor of social adjustment and delinquency prevention (Hirschi, 1969). Those who feel connected to and perform well in school are more likely to become productive members of society because of the greater economic and social opportunities afforded to them. Alternatively, school disengagement is often indicative of a rejection of societal values and goals and has been connected to criminal trajectories.

[43] One could argue that accounting for school level (i.e., elementary, middle, or high schools) is considered a school characteristic, which is more common in previous literature. However, school demographics and institutional practices are often overlooked.

Gottfredson and Hirschi (1990), for example, propose a general theory of crime that centers around self-control and note the school as the second most important institution (after the family) to socialize youth and punish lapses in self-control. Moreover, desistance from crime coincides with age and the responsibilities that accompany adulthood. One such example is entrance into the labor force, which is highly correlated with educational attainment, though Gottfredson and Hirschi reject the notion that this situational variable explains crime once individual characteristics are considered. Instead, they argue that "the school correlations stem from the connections between the school's system of rewards and restraints and the individual's abilities and level of self-control" (p.162). In other words, the primary role of the school is that of a socializing, and sanctioning, institution.

Sampson and Laub (1995) also argue that the school is an important socializing institution and incorporate two factors related to school in their theoretical model: school attachment and school performance. According to their theory, school factors mediate the effects of structural background characteristics (e.g., family SES, parental criminality, mother's employment, etc.) on delinquency. School attachment and performance, therefore, are posited to be central components of delinquency avoidance.[44] Sampson and Laub report significant relationships between several structural background characteristics and school attachment and performance (both composite variables), but find that the majority of the background variables were not mediated by the school variables, and school performance was not a significant predictor of delinquency.[45]

[44] Sampson and Laub also note that structural characteristics of the school should be included, such as school crime rates and student ethnic composition, but these measures were not available and they were unable to estimate their effects on school attachment and performance.
[45] The authors test the model with a few different measures of delinquency and do find a significant relationship between school performance and teacher-reported delinquency.

Finally, labeling theory offers a compelling explanation for student delinquency. The first study to expressly and empirically test labeling theory was conducted by Frank Tannenbaum (1938). In this study of juvenile gang members, he found that the earliest indicators of delinquent behavior came not from the juveniles themselves, but the perspectives of adult authorities, such as parents and teachers. Labeling theory suggests that behaviors not in alignment with the values of mainstream society are rebuked and punished, and this response to otherwise noncriminal behaviors labels the individual as "delinquent." Eventually, the individual's self-concept begins to reflect this label and the stigmas attached to this label, and his/her future behavior is modified by this perception. Becker (1963) builds on this concept of labeling by focusing on rule enforcement, which he argues are applied differentially by persons in positions of power.[46]

Although the present study does not explicitly test any of the aforementioned theories, their relevance in the relationship between school exclusions and delinquency is apparent. School is theorized to serve as an influential socializing institution, particularly for those whose families might not contribute to the socialization process in a persistent and positive way. Students who are suspended or expelled are not only denied the educational benefits of a formal education and the social capital it provides, but they are also removed from a setting of formal social control. It is no wonder, then, that students who have been excluded from school are more likely to be involved in the juvenile or criminal justice system, as students not in school are more likely to engage in harmful behaviors (Farchi et al., 1994), and more unstructured time with peers also creates opportunities for deviant practices (Osgood, Wilson, O'Malley, Bachman, and Johnston, 1996). Moreover, as labeling theory and the school-to-prison pipeline suggest, the exclusion process characterizes these students as harmful or threatening to the well-being and/or

[46] The previous chapter develops and discusses this concept.

education of their peers, and because of the exclusion(s), they are more likely to repeat a grade, dropout, and get arrested than students who were not excluded. Considering that most suspensions are not due to serious or criminal violations (see Frey, 2014; Mendez & Knoff, 2003), these empirical findings give some credence to the labeling perspective.

Schools and Neighborhoods

The study of neighborhood effects and community differences is extensive. These studies generally rely on the geographical boundaries defined by the census and other government statistics. Neighborhoods, however, are better thought of as "ecological units nested within successively larger communities" (Sampson, Morenoff, & Gannon-Rowley, 2002, p. 445), and they are often overlapping rather than distinct boundaries (Hipp & Boessen, 2013). Neighborhoods are not isolated entities; in fact, there are many shared values, customs, and norms among similarly situated neighborhoods (Anderson, 2000; Venkatesh, 2008). Neighborhood scholars argue that location – as opposed to individual characteristics – is fundamental to explanations of crime, and some areas are more prone to criminal activity than others. Indeed, there are some locations – known as "hot spots" – with consistent criminal activity, despite residential turnover (Brantingham & Brantingham, 1999; Eck & Weisburg, 1995; Sherman, 1995).

Research has shown that the presence of, and proximity to, schools is associated with higher crime rates. Schools and the areas immediately surrounding the school are hot spots for a number of property and violent crimes, including but not limited to burglary, aggravated assault and robbery. This relationship between schools and local crime implies that school-aged youth are involved in these crimes as either offenders or victims. One of the earliest studies to examine

the effect of schools on crime used data from San Diego, California. Motivated by Cohen and Felson's (1979) routine activity theory (described in detail in the next section), Roncek and LoBosco (1983) sought to test the theory using high schools and serious crimes (i.e., FBI Part I Index Crimes), with residential city blocks as the unit of analysis. The authors report that after controlling for social composition, residential environment, and other demographic aspects of the blocks, blocks that were adjacent to a public high school experienced more assault, robbery, auto theft, and especially burglary incidents. Interestingly, blocks that were considered part of the "secondary adjacency" measure – blocks that surround those immediately adjacent to high schools – were not statistically significant for any crime type. Thus, Roncek and LoBosco conclude that proximity only affected adjacent blocks. In in follow-up study with Cleveland, Ohio as the setting, Roncek and Faggiani (1985) again find that public high schools only increase crime on city blocks which are adjacent to the schools. Robbery has also been shown to be more frequent when a high school is present, as Bernasco and Block (2009) found in their study using census tracts.

Roman (2004) made a significant contribution to the literature on schools and neighborhood crime by exploring the extent to which middle and high schools act as generators of violent crime and including numerous measures to test social disorganization and routine activity theory. She includes three school characteristics in her analyses: (1) block distance in miles to the closest school, and two dummy variables representing whether a block is close to (2) a low-resource school or (3) a school with characteristics that represent disorder, on average (referred to by the author as "disorderly milieu"). Using a bordering county of the District of Columbia as the research site, Roman finds that blocks closer to schools have higher rates of violent crime during school hours. This supports routine activity theory since schools attract

youth during school hours, making it the expected time of time to be associated with higher crime rates. Proximity to resource-deprived schools, however, only increases violent crime after school hours, while schools with disorderly milieu increase violent crime during the morning commute. Roman explains these findings as a possible effect of a disorderly exit from school into the community, especially if these schools lack the resources to properly supervise students as they are released from school. Finally, this study also finds that youth hangouts – malls, recreation centers, movie theaters, video arcades and Catholic and private schools – increase violent crime during after-school hours, suggesting that most places where youth congregate without or with limited adult supervision experience an increase in crime. Another study examines school effects on drug crimes and, like Roman (2004), analyzes the relationship between schools and crime using the time of day and season to guide their hypotheses. With the block group as their unit of analysis and Albuquerque, New Mexico as their setting, Willits, Broidy, and Denman (2015) find that elementary schools have no direct effect on local drug crimes at any time of the day or season, while the presence of a middle or high schools is associated with significantly more drug crime incidents during the school session.

Other studies have also assessed the relationship between elementary schools and crime, though the nature of this relationship is unclear. Kautt and Roncek (2007), for example, find that the presence of and proximity to a K-12 school in Cleveland, Ohio is associated with significantly more burglaries in the block. Interestingly, other schools – such as public and private middle schools and high schools – in the same study were not significantly associated with crime. The authors note that accounting for the time of day might help make sense of these results. However, Willits et al. (2013) also considered all three school levels and found various significant results across the Part I Index Crimes for elementary, middle and high schools.

Another study using data from Omaha, Nebraska reported a significant decrease in burglaries in blocks adjacent to public elementary schools – a possible effect of higher guardianship around middle schools before and after school hours (Murray & Swatt, 2013). The direction of this finding is in line with the reported findings by Willits and colleagues (2013), who observed fewer burglaries and larcenies in areas with elementary schools. Because this group of studies uses various combinations of units of analysis, crime types, and research sites, it is difficult to explain why certain significant findings emerge in some studies but not others.

Missing from the literature are studies that use specific characteristics of the school that are associated with criminal behaviors. Gerlinger and Hipp (2017) provide the only study to have done this previously. They scrutinize the relationship between schools and crime by examining the effects of dropouts, graduation rates, and test scores on local juvenile crime.[47] They find that high performing schools, as measured by high graduation rates and test scores, have no effect on crime, but low achieving schools (i.e., schools with a high number of dropouts) are significantly associated with more aggravated assault and robbery incidents. This chapter also examines specific school characteristics that are associated with delinquency and crime (i.e., suspensions and expulsions) to explain neighborhood crime.

Theoretical Influences

[47] The authors also make an argument that juvenile crime is the appropriate measure to use rather than crime, generally, because most crime incidents do not include adult suspects and juvenile victims; therefore, the positive association found between schools and crime is assumed to result from increased levels of criminal activity by the students who attend the school. In the present study, I use crime, as opposed to juvenile crime, to include a larger geographic area/sample size. Suspect information is only available for a few counties and cities in the data employed in this study. Furthermore, the proportion of crime incidents with known suspects is limited.

This research draws on two key criminological theories – social disorganization and routine activity theory – and related research to examine whether school exclusions impact neighborhood crime. Both theories suggest that the simple presence of a school increases crime in the surrounding community. Per social disorganization theory, schools might increase crime by bringing together large numbers of youth with limited social ties to the community. Schools that contribute to the disorganization of a community – in this study, by removing at-risk students from formal social control and producing a new generation of high school dropouts – are expected to have more crime in the local neighborhood. Routine activity theory suggests that schools increase crime by bringing together more suitable targets and more potential offenders under limited supervision. Thus, eliminating students from school and the services it provides allows for more unsupervised time for students who arguably need structured supervision even more than their rule-abiding classmates. Prior work testing routine activity theory using schools has generally found support for the theory, though none have specifically tested school discipline. In this next section, I use these two theories to frame a discussion on how school exclusions might impact local crime.

Social Disorganization Theory

In their seminal 1925 publication, "The Growth of the City: An Introduction to a Research Project", Robert E. Park and Ernest W. Burgess introduced the idea that community level differences could be linked to important social outcomes. Their work on Chicago's changing social and economic conditions sparked interest in the dynamic processes that shaped life in the city. Park and Burgess developed the Concentric Zone Model to explain their findings. As the central business district (CBD) – the city's center – grew, the residential properties in the

immediate surrounding area deteriorated. This mercurial residential zone, known as the Zone in Transition, was occupied by cheap housing, broken families, and a heterogeneous population – many of whom were immigrant workers. As the CBD expanded into the Zone in Transition, residents who could afford to leave abandoned the area and moved further outside of the city. The corrosion of this area caused social disorganization.

Since Park and Burgess's work, many other studies have expanded upon their theory of social disorganization. Shaw and McKay (1942) directly related this theory to crime and delinquency in their pivotal book, *Juvenile Delinquency in Urban Areas: A Study of Rates of Delinquents in Relation to Differential Characteristics of Local Communities in American Cities.* Their detailed studies of Chicago neighborhoods revealed that certain communities had a concentration of delinquency. This work in Chicago had two major contributions to the development of this theory and the study of crime, in general. First, these studies demonstrated the relationship between delinquency and crime with other social ills – namely, poverty, unemployment, and residential turnover. Second, delinquency and crime persisted in some areas despite residential turnover and regardless of the racial composition of the neighborhood (Kubrin, Stucky, & Krohn, 2009). This shows that crime is present in places of deprivation, and there are ecological differences that contribute to rates of crime and delinquency.

More recent work has advanced this theory in meaningful ways. Sampson and Groves (1989) – the first to empirically test social disorganization theory – were fundamental in the modern development of social disorganization theory. They proposed that the relationship between social disorganization and crime is mediated by certain community characteristics relevant to informal social control. Other scholars have also noted that the social ills found in some neighborhoods inhibit the community's ability to administer social control, leading to

higher rates of unfavorable behaviors by community members (Bursik & Grasmick, 1993; Kornhauser, 1978; Kubrin & Weitzer, 2003). More specifically, social disorganization theorists argue that through social ties, informal social control, and collective efficacy, communities may contribute to or depress crime and delinquency in a socially disorganized area. The amount and extent to which these community characteristics are at play depends on the level of social disorganization present, which is often measured using poverty, racial/ethnic heterogeneity, residential mobility, unemployment, young males, single-headed households, and urbanization, among others. When these conditions exist in a community, particularly at high rates, the result is typically fewer formal and informal social networks, thereby weakening the community's ability to monitor deviant behaviors (Sampson, 1988).

The key community characteristics mediating social disorganization and crime include social ties, informal social control, and collective efficacy. *Social ties* are the relationships between members that make up the community network. The quality and quantity of these ties impact the degree to which the community shares values, customs, and norms as well as the frequency of their interactions. Social control refers to the capacity of a group to regulate conformity. Unlike formal regulations or institutions that enforce behavioral compliance, *informal social control* refers to community- and self-regulating mechanisms that are practiced to achieve public order. Examples include the monitoring of delinquent youth groups by community members, or self-monitoring behaviors that are learned through social processes and reflect a desire to conform to social rules. *Collective efficacy* – a concept introduced by Sampson, Raudenbush, and Earls (1997) – links social bonds with a willingness to intervene for the common good. Whereas prior scholars had associated these features with crime directly,

Sampson and colleagues have suggested that the social relationships between community members and their ability to enforce social control can alter that link.

Social Disorganization and Exclusionary Discipline

Exclusionary discipline may contribute to the social conditions present in disorganized neighborhoods. For instance, suspensions and expulsions have been linked to higher rates of dropping out, which increases delinquency and lowers economic security. Local organizations and institutions – such as churches, recreation centers, and schools – provide opportunities for community members to come together, form ties, and bond (Krivo & Peterson, 1996), thus increasing informal social control in that community and moderating the effects of social disorganization.[48] When schools exclude students, they remove at-risk youth from the social control and bonds provided by traditional schooling. Students who would normally spend a significant portion of their day in the classroom and participating in school activities are sent home, where they have more time to socialize with delinquent peers and where they might not receive any adult supervision. Furthermore, as noted above, excluded students are more likely to drop out of school altogether. Since education is significantly associated with delinquency and criminality, it is plausible that schools that rely on exclusion as a form of punishment contribute to crime in the surrounding area.

Routine Activity Theory

Routine activity theory was first proposed by Cohen and Felson (1979) in response to a paradoxical occurrence in crime rates. Although social and economic conditions in the United

[48] Peterson, Krivo, and Harris (2000) found that the presence of recreation centers in areas of extreme economic deprivation reduced violent crime in the surrounding community.

States had improved since 1960, violent crime rates over the next decade and a half had significantly increased. Indicators of well-being – such as educational attainment, poverty, and unemployment rates –are known predictors of crime and delinquency, yet improvements in every category were not associated with a reduction in crime. Cohen and Felson sought to understand this phenomenon by focusing on changes in the structural patterns of people's routine activities and how these changes might encourage greater criminal opportunities.

This theory is based on the following premise: crime occurs when suitable targets, motivated offenders, and the absence of capable guardians all converge in time and space. Drawing from Hawley's (1950) human ecology theory, Cohen and Felson (1979) explain the routine activity approach as follows: "Unlike many criminological inquiries, we do not examine why individuals or groups are inclined criminally, but rather we take criminal inclination as given and examine the manner in which the spatio-temporal organization of social activities helps people to translate their criminal inclinations into action" (p.589). It has been used to explain macro-level changes in crime and victimization rates (Cohen & Felson, 1979; Cohen, Felson, & Land, 1980; Messner & Blau, 1987; Roncek & Maier, 1991), as well as individual differences in offending (Miethe, Stafford, and Long, 1987; Osgood and Anderson, 2004; Osgood et al., 1996). Support for routine activity theory has been mixed, though most of the multitude of studies testing it do not properly account for all three required conditions. As Kubrin and colleagues (2009) note, a major limitation in these tests of routine activities is a failure to measure variation in motivation. Osgood et al. (1996), however, did include motivation in their analyses and found support for the theory.

Studies that have examined routine activity patterns have also assessed whether crime is randomly distributed in space, or whether crime is concentrated in certain locations (Anselin,

Cohen, Cook, Gorr, & Tita, 2000; Sherman, Gartin, & Buerger, 1989; Spring & Block, 1988). These studies have found that opportunities for crime occur in some areas more than others, often because of local attractors like drinking establishments or youth hangouts, resulting in higher crime rates. Businesses that promote liquor consumption, such as taverns and cocktail lounges, are consistently found to be associated with higher levels of crime in low and high crime areas (Roncek & Bell 1981; Roncek & Maier 1991). The presence of an institution or business that attracts more potential offenders and potential victims creates more opportunities for crime, thereby resulting in higher crime rates at that location.

In their work testing routine activity theory to explain individual differences in offending, Osgood et al. (1996) found that unstructured time with peers (the absence of authority figures) created opportunities for deviant behavior, including substance use, criminal behavior, and dangerous driving. Osgood and Anderson (2004) also examined individual differences of deviant behavior among eighth graders and found that parental monitoring had a very strong contextual effect on unstructured socializing. Youth who engaged in these routine activities had an increased likelihood of engaging in deviant behavior.

Routine Activities and Exclusionary Discipline

Routine activity theory and exclusionary discipline might explain crime in one fundamental way: exclusions increase opportunities to offend by removing at-risk students from school supervision, allowing for more time to socialize with delinquent peers without adults to monitor their behaviors. Specific to the theory, there are more potential offenders and an absence of capable guardians; excluded students are sent home whether or not there is an adult there to supervise. A report published by the Centers for Disease Control and Prevention (CDC) revealed

that students who are not in school are more likely than students in school to engage in harmful behavior, such as tobacco, alcohol, and drug use, involvement in physical fights, and weapon carrying, among others (Farchi et al., 1994).[49] Schools with high suspension and expulsion rates, then, are predicted to have higher crime rates in the areas surrounding the school, assuming students hang around the general school area (particularly if it is also their home neighborhood) in their free time.

The Present Study

This study is motivated by a straightforward research question: Do school exclusions impact neighborhood crime? Surprisingly, no study to date has tested a macro-level school-to-prison pipeline. I use southern California as a research site to examine whether suspensions and/or expulsions increase various crime types in the surrounding neighborhood. Because of the strong causal and correlational relationship between exclusions and crime in individual-level research, I predict more crime in areas that have high exclusion-producing schools.

This study uses crime, rather than juvenile crime, to answer the proposed research question.[50] I therefore hypothesize significant findings based on the types of crimes juveniles are most likely to commit. With juveniles accounting for half of all property crime arrests (Office of Juvenile Justice and Delinquency Prevention, 2000), I anticipate a stronger effect on property crimes than on violent crimes. Among the three index property crimes included in this study, juveniles make up a significant portion of arrests for each crime type: motor vehicle theft (36%),

[49] CDC defined students "out-of-school" as follows: students not attending school and had not graduated from high school or attained General Educational Development credentials at the time of the interview.

[50] Most police agencies did not provide suspect information, precluding the use of juvenile crime measures. However, even if suspect information were provided for all cities, the types of crimes for which a suspect is known generally limits the study to person crimes. Using crime (instead of juvenile crime) allows for a greater sample size and an analysis of several crime types.

burglary (35%), and larceny-theft (32%). Therefore, all three property crimes are expected to increase with the number of exclusions in the area. Among the three violent index crimes included in this study, robbery is expected to have the strongest association with school exclusions because juveniles account for more robbery arrests (27%) than any other violent crime (i.e., aggravated assault or murder).[51] However, the most common violent crime type committed by juveniles is aggravated assault (Puzzanchera, 2014), making it likely that aggravated assault would also increase with the number of suspended or expelled students.

DATA AND METHOD

The data employed in this study have been retrieved from various sources. I combine several datasets to create block-level data from 2004 to 2011. Demographic data come from Census 2000 and 2010 and the American Community Survey (ACS). Block-level data that were not provided by Census were imputed using information about the block groups in which these blocks are nested using a synthetic estimation approach (see Hipp & Boessen, 2013 and "Supporting Information" to Boessen & Hipp, 2015). Rather than imputing values from the block groups by assuming homogeneity, the synthetic estimation approach models the predicted values using the higher level of aggregation (i.e., block groups). More specifically, the process is as follows: (1) block group coefficient estimates are used to obtain values at the block level, (2) imputed block level data are adjusted to sum the value in the block group, and (3) uncertainty is added to the block-level values based on the uncertainty of the block group model (Boessen & Hipp, 2015). After the block data were generated, these data were linearly interpolated across

[51] These percentages are based on a report published in 2000. Although these numbers are likely outdated, they fit the time frame of the present study. They also reflect juveniles ages 10-17, which overlaps nicely with this study's sample of middle and high schools.

years. Crime data were collected from local police agencies in southern California.[52] School discipline data are provided by the California Department of Education's (CDE) "Expulsion, Suspension, and Truancy" data files for school years 2004-05 to 2010-11. If a school was opened or closed during this period, I only include it in the study for the years in which it was open. The final dataset includes exclusion information for all public middle, high, and nontraditional schools in the following southern California counties: Los Angeles, Orange, San Bernardino, Riverside, San Diego, and Ventura.

Southern California is home to the second largest metropolitan area in the country. Over the last 50 years, there have been substantial changes in demographics, land use, jobs, housing, and transportation, though these changes vary significantly from one city to another (Hipp, Basolo, Boarnet, & Houston, 2012). In Los Angeles County in particular – which contains the second largest school district in the United States, the Los Angeles Unified School District (LAUSD) – there has been enormous growth in minority populations, especially Latinos, while the white population has slowly declined. Violent crime in the southern California region has generally remained stable, and this is true for both high and low crime city clusters (Hipp et al., 2012).[53] There is much less variation in property crime rates, and the cities with the lowest crime rates remained relatively constant over the past several decades, while cities with the highest property crime rates appear to have experienced a steady increase since 1960.

In terms of school discipline, California currently permits suspension or expulsion for a host of school violations (e.g., damaging school or private property, harassment, bullying, and many others), though it only mandates suspension (and requires a recommendation for expulsion) for violations that cause or attempt to cause physical harm to another person or that

[52] See a detailed description of data collection procedures in Chapter One.
[53] The authors note that the violent crime rate for the entire region declined, but there is wide variation in crime rates between city clusters.

involve the selling of controlled substances (U.S. Department of Education, 2016). The suspension rate has declined for students of all racial and ethnic backgrounds in the last three years, according to a report by the Center for Civil Rights Remedies (Losen, Keith, Hodson, Martinez, & Belway, 2015), which also correlates with higher academic achievement for every racial group. This has been, in large part, due to a drastic decline in suspensions for "willful defiance", which made up 43 percent of all suspensions in 2012 (Public Counsel, 2014). This category has also been formally removed from a few of the state's largest school districts, with LAUSD leading the way in 2013.[54] However, for the purposes of this study, which contains school discipline data from school years 2004-05 to 2010-11, California permitted exclusions for numerous discretionary and behavioral violations. Thus, during the study period, California excluded students at approximately the same rate as the national average (See Figure 2.1).

Dependent Variables

There are six index crimes used in this study: aggravated assault, burglary, larceny, motor vehicle theft, murder, and robbery. Violent and property crime aggregate measures are created using these six crime types.[55] The most common crime committed is larceny, while the most uncommon crime committed is murder (See Table 2.1). Altogether, property crimes occur over four times as frequently as violent crimes.

Independent Variables

School Characteristics

[54] San Francisco Unified removed the "willful defiance" category in the 2014-15 school year, and Oakland Unified removed the category in the 2015-16 school year.
[55] Violent crimes consist of aggravated assault, murder, and robbery incidents. Property crimes consist of burglary, larceny, and motor vehicle theft incidents.

The primary variables of interest are suspensions and expulsions. Suspensions are common, temporary disciplinary responses to student misbehavior, while expulsions are permanent exclusions, typically reserved for only the most serious offenses and require approval from the district board. The suspension variable is not separated by in-school and out-of-school suspensions, but instead offers the total number of suspensions given in a single school year. Although suspensions may lead to increases in delinquency, this is not necessarily something that happens while the student is suspended. Instead, as labeling theory and the school-to-prison pipeline literature suggests, it could take much longer for the student to internalize the "bad kid" label, though the amount of time between suspension and delinquency or crime is unknown. Whether the student is removed from school grounds is less important since all suspensions remove students from the classroom and disrupt their educational path.[56] Both exclusion measures are included as counts as it is hypothesized that more exclusionary incidents leads to more crime.[57] Both variables are logged to obtain a normal distribution and improve model fit.

A few school characteristics are used as controls in this study. One concern might be that the results are an effect of disorderly schools on neighborhood crime rather than suspensions and expulsions, specifically. Truancy is therefore included in the models for two reasons: (1) truancy reflects low school attachment, and this measure serves as a control for overall school delinquency that is unrelated to discretionary punishments,[58] and (2), following Monahan and

[56] Access to data that permits such an analysis would provide an interesting comparison between in- and out-of-school suspensions if more crime are, in fact, committed in areas with more out-of-school suspensions because this might suggest that students are committing these offenses while excluded from school.

[57] Exclusion rates are not used in this study because they do not account for the number of students who are not in school because of an exclusion. For example, a 20% suspension rate for a small school is not equal to a 20% suspension rate in a large school since this study is examining effects on the neighborhood.

[58] Students who occasionally skip school are not, and should not, be considered delinquent. However, habitual truancy at the school level is problematic and indicates overall low school

colleagues (2014), truancy is included to control for students who are willingly absent from school (compared to excluded students, who are formally removed). A second school characteristic is school enrollment, which is included to control for the number of students brought to an area in a normal day since delinquent behaviors among youth are typically on the rise at this age (Farrington, 1986).[59] This controls for the average level of delinquency expected given the number of students who frequent the area. The last school characteristics are counts for the number of middle, high, and nontraditional schools that contribute to the total suspension and exclusion numbers in a given area.

Both the crime and school data are geocoded using ArcGIS. To estimate the effects of school exclusions on crime, I create two-mile spatial buffers with an inverse distance decay function for each school characteristic so that any school within the buffer is associated with the focal block (See Figure 2.2). If more than one school is within two miles of the focal block, the suspension and expulsion counts are summed, separately. By using spatial buffers, as opposed to zip codes (Welch & Payne, 2010, 2012) or catchment areas, this study is not met with a boundary problem in which the effects of schools closest to the boundaries would be limited by the boundary itself.

Before going over the neighborhood characteristics that serve as control variables in the model, I first describe how a two-mile spatial buffer was selected as an appropriate length between the school and the blocks it is predicted to affect. I elect to use two-mile spatial buffers assuming most students attend their local, assigned school (see also Gerlinger & Hipp, 2017). This decision was made after considering a few important pieces of information. First, a random selection of school district boundaries within the six counties in this study revealed that most

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attachment by the student body. This study assumes that a high number of truants is reflective of larger problem behaviors in the school.

[59] Secondary school students are approximately 11-18 years of age in California.

blocks are well within a two-mile radius from the center, meaning most student residences are also likely within two miles from the school.[60] Second, journey-to-crime research demonstrates that offenders generally travel short distances to commit crime (Bernasco & Block, 2009; Rengert, 2004; Wiles & Costello, 2000), and this is particularly true for juveniles, who have more limited means of traveling greater distances. Third, Kirk (2009) reported that roughly 70 percent of the students in his study attended their local school, in which case their school and home neighborhoods would be the same. Fourth and finally, as demonstrated by Wiles and Costello (2000), any node familiar to the offender can be the origin of the offender's journey to crime. High school students, who spend a great deal of time in and around the school, are well acquainted with the neighborhood surrounding the school, even if it is not their home neighborhood. Therefore, it is likely that youth will commit crimes near their school and/or home. Thus, I believe a spatial buffer of two-miles captures both the school attended by local students and the most probable offending area.

>> INSERT TABLE 2.1 ABOUT HERE <<

Neighborhood Controls

Several neighborhood demographic variables are included as controls to isolate the relationship between school exclusions and crime. The following demographic variables are

[60] For example, the Placentia-Yorba Linda Unified School District posts school attendance boundaries for each school within the district here: http://www.pylusd.org/apps/pages/index.jsp?uREC_ID=206487&type=d&pREC_ID=453794. See also the San Bernardino City Unified School District's school boundary map here for middle schools: http://www.sbcusd.com/DocumentCenter/View/126156 and here for high schools: http://www.sbcusd.com/DocumentCenter/View/126157. And finally, the interactive LAUSD boundaries for all school levels can be found here: https://www.arcgis.com/home/webmap/viewer.html?webmap=e32c5cd92bf74e19acafb26752b63f0a

included for the focal block, and as spatial buffers (described in the next section), to minimize the risk of spurious results: (percent) black, Latino, occupied housing, ages 5 to 14, ages 15 to 19, and four land use measures (i.e., industrial, office, residential, and retail). I also control for population (logged). Hipp (2007) found that percent black and percent Latino significantly influenced crime in the neighborhood, while percent Asian and percent other did not. Thus, percent black and percent Latino are included to control for the effect of neighborhood racial composition on crime. Higher percentages of occupied housing are expected to decrease crime since there are more potential guardians in the area. I also control for the percentage of young people – those most likely to commit crime (Farrington 1986; Stolzenberg & D'Alessio 2008) – to isolate the effects of school exclusions. It is plausible that some areas have higher crime reports based on the availability of desirable resources, or lower crime reports due to a limited access to desired goods and more guardianship. To account for these differences, I include four types of land use measures.

Several other measures are products of two or more variables. The racial/ethnic heterogeneity measure is based on the Herfindahl index using five racial categories – white, black, Latino, Asian, and other. The Herfindahl index is as follows:

$$1 - \mathrm{H} = \sum_{i=1}^{N} s_i^2,$$

where N is the total number of racial groups (5) and s_i is the proportion of racial group i. I then subtract this number from one to create a measure of heterogeneity, where higher values represent greater heterogeneity. Greater levels of ethnic heterogeneity are posited to decrease social interaction, thereby increasing crime (Sampson, 1991). I also create measures of disadvantage and residential stability using factor analysis. Using confirmatory factor analysis, disadvantage is captured by percent below poverty, average household income, persons with a

bachelor's degree, and single parent families.[61] In the block, I measure residential stability as the percent home owners; in the spatial buffers, I measure residential stability as the mean of the standardized values of percent home owners and average length of residence. I also created various demographic spatial buffers (i.e., 0.25 mile, 0.5 mile, 1.5 miles) to test these processes at an appropriate geographic unit, but only include the quarter-mile demographic spatial buffers in the final models, as the results for all units are fairly similar.

Lastly, year and county dummy variables are included to control for any differences in crime that may be explained by county-level preventative approaches or responses to crime and overall trends in crime that occurred unrelated to school exclusions. For instance, both national (Puzzanchera, 2014) and local crime rates (Hipp et al., 2012) had decreased during the study period. The descriptive statistics for all variables are displayed in Table 2.1.

Analytic Strategy

I integrate school data with longitudinal crime and demographic data for small geographic units (census blocks) in six southern California counties. I estimate all models using negative binomial regression because the outcome variables are overdispersed counts (Rodriguez, 2013). Each crime outcome is estimated in a separate model for suspensions and expulsions for a total of 6 individual models plus the aggregated property and violent crime outcomes. These annual models, with blocks as the unit of analysis, are expressed by the following equation:

$$E(y_t) = \alpha + \beta_1 \text{WSCHOOL}_t + \beta_2 \text{NEIGHBORHOOD}_t + \beta_3 \text{WNEIGHBORHOOD}_t + B_4 \text{COUNTY}_t + \beta_5 \text{YEAR},$$

[61] The factor scores are scaled using the poverty variable.

where *y* represents the crime incidents in that year, α is an intercept, WSCHOOL represents school characteristics in the spatial buffer (suspension, expulsion, truancy, enrollment, and school types) in that year, NEIGHBORHOOD is a matrix of the block demographic characteristics in that year, WNEIGHBORHOOD is a matrix of the neighborhood characteristics in the 0.25-mile spatial buffer in that year, COUNTY is a matrix for the county dummy variables, and YEAR is a matrix of year dummy variables.

The exclusions for each school type (i.e., regular middle and high schools and nontraditional secondary schools) are combined by exclusion type (i.e., suspensions and expulsions) into a single measure to represent all suspensions and expulsions in the area. In other words, expelled students from regular schools are treated the same as expelled students from nontraditional schools. Once excluded, each student is presumed to process the removal from school, and the time spent unsupervised, in the same way. Furthermore, because southern California is a densely populated area, the average two-mile buffer contains at least one middle, high, and nontraditional school. Therefore, making an assumption about which students are associated with changes in neighborhood crime is largely unsubstantiated.[62]

I also examine whether the impact of exclusions on crime is moderated by the level of disadvantage in the neighborhood. To do this, I include an interaction between suspensions and expulsions and neighborhood disadvantage (suspension × disadvantage; expulsion ×

[62] To check the validity of this assumption, I calculated the Bayesian Information Criterion (BIC) statistic to compare the models with the combined measures to the models with separate school variables by school type. The BIC assesses overall fit of a model and allows comparisons of nested and non-nested models. Unlike many Pseudo R^2 measures, the BIC has penalties for including variables that do not improve model fit and is particularly useful for large samples (Williams, 2016). Half (3/6) of the BIC results indicated "very strong" support for the model with the combined measures, and the other half indicated "very strong" support for the models with separate measures (BIC differences were from 90 to 720). Thus, the results were generally inconclusive and likely due to statistical noise.

disadvantage). I add both interactions to each model separately; thus, this creates an additional component to the model (+ β_6EXCLUSION×DISADVANTAGE$_t$).

RESULTS

I discuss the effects of suspensions and expulsions on the six neighborhood crime outcomes first, followed by the aggregate crime measures (i.e., violent and property crimes). Lastly, I discuss the results for the contextual models, which examine whether there is variation in the effects of exclusions on crime based on neighborhood disadvantage.

>> INSERT TABLE 2.2 ABOUT HERE <<

Main Effects

Table 2.2 displays the results of the models predicting the six crime types. More suspensions in an area yields significant results in all models. Higher suspension counts are associated with more aggravated assault ($b = .087$, $p < .001$), burglary ($b = .026$, $p < .001$), larceny ($b = .041$, $p < .001$), motor vehicle theft ($b = .026$, $p < .001$), murder ($b = .079$, $p < .001$), and robbery incidents ($b = .053$, $p < .001$). Suspensions have the strongest impact on aggravated assault and murder. A standard deviation increase in suspensions is associated with a 12.6% increase in aggravated assault and an 11.3% increase in murder.[63] Notably, the relationships between suspensions and crime are all positive in direction.

Expulsions are substantively different exclusion types but are also expected to increase crime in the surrounding areas. Expulsions are permanent disciplinary actions used in response to serious school violations, and as such, they are expected to have a stronger connection to neighborhood crime than suspensions. However, contrary to the expected findings, expulsions

[63] Standard deviation changes are estimated using the following formula: (exp(b × SD) – 1).

are negatively associated with every crime outcome except aggravated assault. Areas with more expulsions tend to have more aggravated assault incidents (b = .073, p < .001) and less burglary (b = -.015, p < .001), larceny (b = -.026, p < .001), motor vehicle theft (b = -.065, p < .001), murder (b = -.075, p < .001), and robbery incidents (b = -.099, p < .001). Expulsions have the greatest impact on murder and robbery, but unlike suspensions, they decrease the number of murder and robbery incidents. A standard deviation increase in expulsions yields a 13.5% reduction in murder and a 10.4% reduction in the number of robberies, holding all else constant.

Truancy, which was used as a measure of school delinquency and as a control for students who are willingly absent from school, is significant in every model except when predicting robbery. Interestingly, among the significant truancy effects, the association is only positive with aggravated assault (b = .021, p < .01) and motor vehicle theft (b = .017, p < .01); all other significant associations between truancy and crime are negative. This suggests that after controlling for various neighborhood characteristics, more willingly absent students in the area is associated with less crime, while more forced temporary removals from school are associated with more crime. The other school characteristics include enrollment and the number of schools within the area by school type. For every crime except aggravated assault (b = -.159, p < .001), larger schools are associated with more crime in the area. In general, having more public middle and high schools in the neighborhood is associated with fewer crime incidents. Murder, however, is unaffected by the number of high schools, and the number of robbery incidents is unassociated with the number of local middle and high schools. More nontraditional schools are associated with higher counts of every crime type except motor vehicle theft. Thus, nontraditional schools appear to be more criminogenic than traditional public secondary schools.

Neighborhood demographic variables were included to control for any potentially spurious results. The first group of neighborhood variables pertains to the focal block, and the second group pertains to the blocks within a quarter-mile of the focal block (i.e., the surrounding neighborhood). I go over the results for the neighborhood variables in this order.

Racial/ethnic heterogeneity appears to have a limited impact on crime considering it is only significant in one model (i.e., murder) and is in the opposite direction as expected (b = -.004, $p < .05$). Higher percentages of black residents are associated with more aggravated assault, burglary, larceny, and motor vehicle theft. Larger representations of Latino residents are also associated with more aggravated assault and motor vehicle theft, but fewer burglary and larceny incidents. Neither racial composition variables are associated with murder or robbery. The percentage of occupied housing and the percentage of youth ages 5 to 14 are consistently negatively correlated with crime. The percentage of youth ages 15 to 19 is negatively associated with burglary, larceny, and motor vehicle theft, but higher percentages of these older youth are also associated with more aggravated assault and murder. Overall, blocks with more land used for industrial purposes experience more crime, while more office space is generally unassociated with crime except decreased aggravated assault (b = -.003, $p < .05$) and murder (b = -.007, $p < .01$). Blocks that are more residential consistently experience less crime, while blocks that contain more retail land use tend to have more crime. The last three variables related to the focal block are disadvantage, home ownership, and population. Blocks with higher levels of disadvantage experience more aggravated assault (b = .007, $p < .001$) and murder (b = .009, $p < .05$). The percentage of home owners is almost always significantly associated with less crime, and blocks with more residents, generally, experience more crime.

Many of the demographic spatial buffers have effects similar to the focal block; therefore, I only describe the results that differ when including the surrounding blocks. First, racial/ethnic heterogeneity is significant and positive in direction in every model except predicting aggravated assault. This is now in the expected direction, as heterogeneity is theoretically posited to increase crime. The percentage of Latino residents in the surrounding blocks also has a different effect on crime than when just considering the focal block. Larger proportions of Latino residents in the spatial buffer are associated with more crime for every crime type. Percent ages 5 to 14, which was negatively associated with crime in the focal block, is positively associated with murder, surprisingly ($b = .027$, $p < .001$). The only land use variable that changed significantly when expanded to include neighboring blocks is percent residential; blocks in areas with more residential use experience more crime. Lastly, the level of disadvantage in the quarter-mile buffer around the focal block is now statistically significant in every model except motor vehicle theft. A higher level of disadvantage in the immediate area is associated with more aggravated assault ($b = .023$, $p < .001$), murder ($b = .022$, $p < .001$), and robbery incidents ($b = .016$, $p < .001$), but burglary and larceny appear to be reduced when disadvantage is high ($b = -.007$, $p < .001$ and $b = -.012$, $p < .001$, respectively).

Aggregate Crime Measures

The aggregated crime measures are violent and property crimes, where violent crime includes aggravated assault, murder, and robbery, and property crime consists of burglary, larceny, and motor vehicle theft. As stated earlier, school exclusions are anticipated have a stronger effect on property crime than violent crime because juveniles tend to make up a larger

proportion of total property crimes. The results for the suspension and expulsion models estimating property and violent crimes are displayed in Table 2.3.

In this section, I discuss the results for the school characteristics only. As expected, neighborhoods with more suspensions experience more violent (b = .069, p < .001) and property crimes (b = .027, p < .05), and more expulsions are associated with more violent crimes (b = .025, p < .001) but fewer property crimes (b = -.028, p < .001). Thus, a standard deviation increase in suspensions yields 9.8% more violent crimes and 3.7% more property crimes, and a standard deviation increase in expulsions is associated with a 3.7% increase in violent crimes and a 4.0% decrease in property crimes, holding all else equal. The stronger results for violent crimes compared to property crimes opposes expectations, particularly the negative effect of expulsions on property crimes.

Truancy is unrelated to the aggregate violent crime measure but is significantly and negatively associated with property crimes (b = -.025, p < .05). Thus, while the number of willingly absent students is associated with fewer property crimes, having more students who are excluded from school as a form of punishment increases the amount of crime in the area. The number of students in the area is also unrelated to violent crime but is positively associated with property crime (b = .153, p < .05). Considering the types of crimes that juveniles are likely to commit, regardless of exclusion status, this finding is as expected. Having more middle schools in the area is associated with fewer property crimes (b = -.015, p < .01) but is unrelated to violent crime, and more high schools are associated with reduced violent and property crimes (b = -.010, p < .05 and b = -.033, p < .001, respectively). Finally, having more nontraditional schools in the area correlates with more violent (b = .038, p < .001) and property crimes (b = .023, p < .001).

>> INSERT TABLE 2.3 ABOUT HERE <<

Exclusions in Disadvantaged Neighborhoods

This section explores the relationship between exclusions and neighborhood crime in disadvantaged neighborhoods. Some scholars have argued that criminalization tends to concentrate in disadvantaged minority communities (Wacquant, 2001), but the effect of this heightened social control on crime in disadvantaged communities has not yet been investigated. If disadvantaged communities experience a disproportionate amount of crime because of these exclusions, then the desire to maintain immediate order in the classroom may be at the long-term expense of disadvantaged communities by creating more disorder.

To understand the relationships between exclusionary discipline and crime in context, I plot these interaction effects for all crime outcomes (see Table 2.4).[64] The exclusion variables and disadvantage are centered to eliminate collinearity issues. Therefore, the averages are set to 0, as seen in the figures. High and low contexts are generated as one standard deviation above and below the mean, and this applies to both the number of suspensions and the level of disadvantage in the area.[65]

>> INSERT TABLE 2.4 ABOUT HERE <<

Suspensions

The suspension and disadvantage interaction term yields significant results for every crime outcome except motor vehicle theft. The interpretations of these findings are organized by

[64] The results for the aggregate crime measures were also plotted. Property crime counts are generally driven by the two most frequently committed offenses (burglary and larceny), while the violent crime measure typically resembles the results for the most frequently committed violent offence (aggravated assault). Because the plots for the aggregated crime measures were similar to the most influential individual crimes, I do not include aggregate crime plots.
[65] The .25-mile spatial buffer for neighborhood disadvantage is used to create the interaction.

the direction of the effect (i.e., positive or negative) and whether crime is highest in areas that have more or less than average levels of disadvantage. Suspensions are associated with more local crime and are highest in disadvantaged neighborhoods for three crime outcomes: aggravated assault (Figure 2.3), murder (Figure 2.4), and robbery (Figure 2.5). All three of these crime types were positively and significantly associated with suspensions in the previous models that did not include the interaction term. The remaining crime outcomes – burglary (Figure 2.6) and larceny (Figure 2.7) – are also associated with more local suspensions but are highest in areas with less disadvantage than average. The only crime type that is not significantly moderated by neighborhood disadvantage is motor vehicle theft.

>> INSERT FIGURES 2.3-2.7 ABOUT HERE <<

For each crime type, it appears the intercepts vary based on the level of neighborhood disadvantage, but the slopes of suspensions and crime are fairly uniform. This means that, although there is variation by the level of disadvantage, suspensions do not seem to affect disadvantaged communities more than the average or below average disadvantage communities. When suspensions are associated with increases or decreases in crime, this occurs in all neighborhoods. The only plot in which crime appears to increase at a slightly higher rate is Figure 2.3, predicting aggravated assaults. To check whether the rates are different, I estimate the predicted probabilities for blocks near high and low suspension schools by neighborhood disadvantage. For blocks near high suspension schools, the difference between low and high disadvantage neighborhoods is 67%. The same is true for blocks near low suspension schools. Thus, the rate in high disadvantage neighborhoods is higher, but the percentage difference between high and low disadvantage neighborhoods are the same.

Expulsions

In the previous expulsion models, the direct effects of expulsions on crime were primarily negative in direction. That is, expulsions were associated with reduced crime in all categories besides aggravated assault. The same is true according to the models with an interaction term, but there is considerable variation by neighborhood disadvantage. An increase in expulsions is associated with an increase in the number of aggravated assaults, and this appears to occur at a slightly higher rate in disadvantaged neighborhoods (see Figure 2.8), similar to suspensions. Interestingly, the difference between the effects of high and low expulsion schools on assault is the same as the effects of high and low suspension schools. For blocks near both high and low expulsion schools, assaults are 67% higher in disadvantaged neighborhoods compared to more affluent neighborhoods – the same as high and low suspension schools.

>> INSERT FIGURES 2.9 ABOUT HERE <<

Negative associations between expulsions and crime include burglary (Figure 2.9), larceny (Figure 2.10), motor vehicle theft (Figure 2.11), and robbery (Figure 2.12). Burglary, larceny, and motor vehicle theft incidents decrease as the number of local expulsions increases, but they tend to be highest in areas that are less disadvantaged. Robbery, however, occurs more often in disadvantaged neighborhoods, but again the number of crimes decreases with more local expulsions.

DISCUSSION

Exclusionary discipline has been associated with a host of consequences, including grade retention, lowered school performance, dropping out, increased delinquency and crime, and future contact with the criminal justice system. While the connection between exclusions and

future criminality has been demonstrated in longitudinal studies, no research to date has examined how exclusions impact crime on a macro level. This study assessed how suspensions and expulsions affect neighborhood crime in southern California and examined whether exclusions had a greater impact in disadvantaged neighborhoods. The findings provide evidence for the school-to-prison pipeline – that suspending students from school reinforces rather than curbs antisocial behaviors – but did not find strong evidence that the effect of exclusions on crime is heightened in disadvantaged neighborhoods. Instead, it appears that crime increases with the number of local suspensions in all neighborhoods.

In general, suspensions are associated with more crime in the neighborhood, while expulsions relate to less crime. The exception for the negative relationship between expulsions and crime is aggravated assault. In neighborhoods with a high number of local expulsions, aggravated assault incidents also tend to be higher. As mentioned earlier, juvenile crimes represent a significant proportion of total burglaries, larcenies, and motor vehicle thefts. Because of this, I expected property crimes to be more affected by exclusions than violent crimes. Suspensions and expulsions, however, have a stronger effect on violent crime than on property crime, as evidenced by the aggregate crime measures.[66] Thus, removing students from school has detrimental effects on the neighborhood and puts students and other community members at risk. This is a particularly grave finding considering most suspensions are not due to serious or violent school violations; rather, it appears that the exclusion itself exacerbates the problem behaviors that manifest at school. Alternatively, because this study uses crime – not juvenile crime – as the outcome, it is also possible that students without supervision are prone to becoming the targets of

[66] The models predicting individual crime outcomes did not support the anticipated findings either. For example, all three property crimes were expected to increase as the number of exclusions increase; however, burglary and larceny were only positively associated with suspensions.

violent crimes. In this case, an exclusionary punishment for violating a school rule extends far beyond an appropriate response.

From a social disorganization perspective, it seems that suspensions contribute to neighborhood disorganization by increasing crime. While this finding alone demands reconsideration by school administrators regarding the use of exclusionary discipline, there may be other serious consequences that are less apparent and beyond the scope of this study. For example, students who are having a difficult time in traditional schools are commonly referred to alternative school placements – educational settings for "disruptive" or "delinquent" youth that have been referred to as "warehouses for academically underprepared sons and daughters of working-class families or single parents receiving welfare" (Kelly, 1993, p.3). Students also frequently drop out of school altogether after they are denied an education at a traditional school rather than attend an alternative program (Lee, Cornell, Gregory, & Fan, 2011), where standards for achievement are exceedingly low (Sekayi, 2001; Solilei, 1998). Communities with a high number of high school dropouts face economic challenges that, as has been documented in myriad studies, are closely aligned with a host of other social hardships. The problems associated with exclusionary discipline at best only impose on the individual, and at worst trouble families and communities over multiple generations.

The findings from a routine activities perspective are less clear. Following this approach, more unsupervised youth in an area were expected to increase the likelihood of a criminal event taking place. This was largely supported in the suspension models results, but the number of truants – students who willingly skip school – were more often associated with reduced rather than increased crime. It is possible that suspended students – who are for one reason or another deemed disruptive to the functioning of the school – are more likely to commit a crime than

students who are simply skipping school (a status offense). If this is the case, it provides yet another reason for schools to prioritize in-school detention or other alternatives to exclusion. Moreover, if unsupervised youth in general are just as likely to become the targets of violent crime, as proposed above, then more truants in the area should be associated with more crime. Instead, it seems that the positive association between suspensions and crime involves student offenders, and this is in line with the individual-level studies that support the school-to-prison pipeline argument.

The exact mechanisms by which students are criminalized and subsequently view themselves as criminals is unknown. This study suggests that suspended students either continue or turn to more delinquent behaviors, and studies that have examined the temporal ordering of this phenomenon find that suspended students are more likely than their non-excluded peers to have some contact with the criminal justice system post suspension, holding all else equal. Borrowing from labeling theory, excluded students may internalize the label of being too disruptive or delinquent to be around the "good" students so that they, too, begin to see themselves this way. The forced removal from school physically and psychologically separates the good students from the bad students, and those on the outside – those excluded from participating in ordinary school activities with their peers – understand that they are no longer part of conventional society. Pairing this social alienation with a lack of resources and support in the community, excluded students involve themselves in antisocial activities with other disengaged and disconnected youth. Although this study cannot address the internalizing processes of delinquent and excluded youth, the findings necessitate an investigation on how excluded students come to understand their expendable status.

The negative relationship between expulsions and crime is perplexing, particularly due to the nature of expellable behaviors. A relatively large number of students removed from school for serious violations does not increase local crime, but instead appears to reduce it. This explanation should not be interpreted to mean that expelled students are less criminally active than suspended students; instead, it is more probable that expelled youth spend their time elsewhere or reenroll in a school district that is further from their home neighborhoods. Because expelled students no longer have direct ties to the local school, they no longer have a need to visit that area, whereas suspended students are only temporarily removed and eventually return back to school. Hence, crimes committed by expelled students may be displaced and undetected by the analyses performed in this study. To capture this effect, future research should examine precisely where and when excluded students commit crimes.

Fortunately, for the most part, school exclusions do not affect disadvantaged neighborhoods to a greater degree than more advantaged neighborhoods. Although statistically significant, the effects are only marginally different in a practical sense. The exception to this is aggravated assault, which is positively associated with both suspensions and expulsions, and unlike the other interactions, does appear to impact crime in disadvantaged neighborhoods more than average or below average disadvantage (i.e., more affluent) neighborhoods. Furthermore, aggravated assaults most commonly take place in disadvantaged neighborhoods, making the relationship between exclusions and violent crime even more troublesome. By releasing thousands of unsupervised youth into communities each year, exclusions exacerbate the dangers present in disorganized neighborhoods.

Limitations

Because this study employs a macro-level analysis of all crime, not juvenile crime, student involvement in crime is unclear. The results of the truancy variable indicate that the high number of crimes associated with suspensions is more likely attributed to student offenders, however, which supports the individual-level studies assessing the school-to-prison pipeline. In the future, scholars might include only juvenile crime to make a stronger argument about the relationship between school discipline and student offending.

A second potential limitation is based on in-school versus out-of-school suspensions and whether there is a difference in ensuing delinquency based on the type of suspension received. Both types remove the student from the classroom, but discipline reform educators and scholars often give preference to in-school suspensions over out-of-school suspensions simply because they keep the students in school and out of trouble during the disciplinary period. From a routine activities perspective, the removal from school gives youth opportunities to offend. If students engage in dangerous or delinquent behaviors during the suspension period, this study would benefit by demarcating the two types. Alternatively, labeling theory asserts there is an internalizing process that occurs after being labeled an "outsider" or "delinquent," which would affect all suspended students, and the delinquent acts that follow suspensions are not necessarily committed during the suspension period. While all suspensions might be thought of as reintegrative shaming, to borrow from John Braithwaite's (1989) theory on punishment and society, in-school suspensions are arguably more shame inducing by gathering excluded students together into a single room, separated from the "good" students. No study, to my knowledge, has directly compared the labeling processes associated with in-school versus out-of-school suspensions and how this influences future criminality.

The third limitation of this study stems from the arguments above. Without knowledge about when, exactly, students become in contact with the criminal justice system after exclusion, testing the school-to-prison pipeline is somewhat arbitrary. If one assumes students become criminally active during the suspension period, an examination of the school-to-prison pipeline should include a much shorter timeline than if one assumes the labeling and internalizing process of multiple exclusions is what makes these youth crime prone. This study uses exclusions from the school year to predict crime in the calendar year. For example, exclusions from school year 2010-11 determine crime during 2011. The significant results suggest that this time frame captures the effect of exclusions on neighborhood crime; however, a follow-up study that utilizes smaller time units, such as months or days, would contribute more to understanding the nature of the school-to-prison pipeline.

CONCLUSION

Despite decades of research showing that exclusionary discipline does more harm than good, local education agencies continue to use them. Punishing students by removing them from school is more than just ineffective; it is shortsighted and reckless. When administrators respond to minor or moderate violations by excluding the student from school rather than confronting the actions that caused the exclusion, they aggravate these antisocial behaviors and the community bears the brunt of it. Exclusions are temporary solutions that ultimately hurt the student and their classmates, families, and communities. The public school system has an obligation to society to educate and protect our youth, including those who are less fortunate and may require more time, patience, and opportunities to learn from their mistakes. For many students, school is their only chance to break a cycle of poverty, making it doubly important to teach and nurture these

students to be contributing members of society. After all, investing in the success of each student creates a safer and more prosperous community for everyone.

Table 2.1 Descriptive Statistics

Variable	*Mean*	*SD*
Crime Types		
Aggravated Assault	0.17	1.89
Burglary	0.29	1.17
Larceny	0.68	4.04
Motor Vehicle Theft	0.26	1.18
Murder	0.00	0.06
Robbery	0.10	0.60
Violent Crimes	0.28	2.10
Property Crimes	1.23	5.48
School Characteristics: 2-Mile Spatial Buffer		
Suspensions	902.61	1128.36
Expulsions	20.68	35.65
Truancies	2074.43	2424.53
Enrollment	5206.62	5509.40
School Type (Counts)		
Middle	1.80	2.01
High	1.59	2.23
Nontraditional	1.12	1.81
Demographic: Block (%)		
Racial/Ethnic Heterogeneity	39.78	19.64
Percent Black	5.53	12.63
Percent Latino	35.53	29.68
Occupied Housing	92.93	11.54
Ages 5 to 14	13.26	7.17
Ages 15 to 19	7.00	4.75
Land Use		
Industrial	4.09	16.32
Office	1.47	8.11
Residential	57.51	43.05
Retail	4.56	15.37
Disadvantage	-0.60	10.62
Home Ownership	66.37	29.84
Population	120.86	198.22
Demographic: 0.25 Mile Spatial Lag (%)		
Racial/Ethnic Heterogeneity	44.46	18.06
Percent Black	5.59	10.78
Percent Latino	37.08	27.87
Occupied Housing	91.94	12.39
Ages 5 to 14	13.15	5.51
Ages 15 to 19	6.96	3.57
Land Use		
Industrial	4.80	13.81
Office	1.74	5.44
Residential	50.75	31.63
Retail	5.13	9.96
Disadvantage	-0.63	10.23
Residential Stability	0.14	0.56
Population	9123.74	14704.27

NOTE: N = 823,301. SES Disadvantage, disadvantage, and residential stability are factor scores.

Table 2.2 Negative Binomial Models Predicting Neighborhood Crime Using Local Suspensions

	Aggravated Assault			Burglary			Larceny			Motor Vehicle Theft		
	b	SE		*b*	SE		*b*	SE		*b*	SE	
School Characteristics:												
Suspension (logged)	0.087	(0.007)	***	0.026	(0.005)	***	0.041	(0.007)	***	0.026	(0.005)	***
Expulsion (logged)	0.073	(0.005)	***	-0.015	(0.004)	***	-0.026	(0.006)	***	-0.065	(0.004)	***
Truancy (logged)	0.021	(0.008)	**	-0.029	(0.006)	***	-0.032	(0.012)	**	0.017	(0.007)	**
Enrollment (logged)	-0.159	(0.037)	***	0.147	(0.033)	***	0.144	(0.068)	*	0.227	(0.030)	***
School Type												
Middle	-0.020	(0.004)	***	-0.019	(0.004)	***	-0.025	(0.006)	***	-0.012	(0.003)	***
High	-0.019	(0.003)	***	-0.031	(0.003)	***	-0.039	(0.005)	***	-0.024	(0.003)	***
Nontraditional	0.039	(0.003)	***	0.028	(0.003)	***	0.021	(0.005)	***	-0.000	(0.003)	
Demographic: Block (%)												
Ethnic Heterogeneity	-0.001	(0.001)		0.001	(0.001)		-0.001	(0.001)		0.000	(0.001)	
Black	0.008	(0.001)	***	0.002	(0.001)	*	0.004	(0.001)	**	0.004	(0.001)	***
Latino	0.004	(0.001)	***	-0.003	(0.001)	***	-0.002	(0.001)	*	0.003	(0.001)	***
Occupied Housing	-0.010	(0.002)	***	-0.008	(0.001)	***	-0.005	(0.002)	**	-0.004	(0.001)	**
Ages 5 to 14	-0.008	(0.002)	***	-0.004	(0.002)	**	-0.011	(0.002)	***	-0.016	(0.002)	***
Ages 15 to 19	0.006	(0.002)	**	-0.008	(0.002)	***	-0.007	(0.002)	**	-0.011	(0.002)	***
Land Use												
Industrial	-0.000	(0.001)		0.008	(0.001)	***	0.006	(0.001)	***	0.009	(0.001)	***
Office	-0.003	(0.001)	*	0.000	(0.001)		-0.000	(0.001)		0.001	(0.001)	
Residential	-0.012	(0.000)	***	-0.010	(0.000)	***	-0.014	(0.000)	***	-0.007	(0.000)	***
Retail	0.009	(0.001)	***	0.011	(0.001)	***	0.016	(0.001)	***	0.012	(0.001)	***
Disadvantage	0.007	(0.002)	***	0.000	(0.002)		-0.003	(0.002)		0.002	(0.001)	
Home Ownership	-0.001	(0.000)	**	0.001	(0.000)		-0.001	(0.000)	*	-0.001	(0.000)	***
Population (logged)	0.673	(0.009)	***	0.674	(0.008)	***	0.687	(0.009)	***	0.718	(0.009)	***
Demographic: 0.25 Mile Spatial Lag (%)												
Ethnic Heterogeneity	0.000	(0.001)		0.006	(0.001)	***	0.005	(0.001)	***	0.005	(0.001)	***
Black	0.012	(0.001)	***	0.014	(0.001)	***	0.005	(0.002)	**	0.012	(0.001)	***
Latino	0.003	(0.001)	**	0.005	(0.001)	***	0.003	(0.001)	***	0.014	(0.001)	***
Occupied Housing	-0.020	(0.002)	***	-0.004	(0.002)	*	0.002	(0.002)		0.002	(0.002)	
Ages 5 to 14	0.004	(0.003)		0.001	(0.002)		-0.006	(0.003)		-0.005	(0.003)	
Ages 15 to 19	0.027	(0.004)	***	-0.002	(0.004)		-0.004	(0.004)		-0.017	(0.004)	***
Land Use												
Industrial	0.003	(0.001)	**	0.001	(0.001)		0.002	(0.001)	*	0.007	(0.001)	***
Office	-0.007	(0.002)	***	-0.004	(0.002)	*	0.002	(0.002)		-0.004	(0.002)	*
Residential	0.004	(0.000)	***	0.005	(0.000)	***	0.003	(0.000)	***	0.004	(0.000)	***
Retail	0.008	(0.001)	***	0.006	(0.002)	***	0.009	(0.002)	***	0.006	(0.001)	***

Disadvantage	0.023	(0.002)	***	-0.007	(0.002)	***	-0.012	(0.002)	***	-0.002	(0.002)	
Stability	0.052	(0.026)	*	-0.236	(0.024)	***	-0.312	(0.029)	***	-0.252	(0.025)	***
Population (logged)	0.050	(0.009)	***	-0.018	(0.007)	*	-0.003	(0.008)		0.036	(0.008)	***
Constant	0.695	(0.018)	***	0.613	(0.016)	***	0.763	(0.018)	***	0.409	(0.018)	***

NOTE: N=823,301. * p < .05, ** p < .01, *** p <.001. Dummy variables for year and county are included in the models but not displayed.

Table 2.2 Continued

	Murder			Robbery		
	b	SE		*b*	SE	
School Characteristics: 2-Mile Spatial Buffer						
Suspension (logged)	0.079	(0.022)	***	0.053	(0.008)	***
Expulsion (logged)	-0.075	(0.013)	***	-0.099	(0.006)	***
Truancy (logged)	-0.060	(0.020)	**	-0.020	(0.018)	
Enrollment (logged)	0.266	(0.060)	***	0.253	(0.122)	*
School Type						
Middle	-0.020	(0.009)	*	-0.000	(0.009)	
High	-0.004	(0.006)		0.001	(0.007)	
Nontraditional	0.019	(0.008)	*	0.032	(0.005)	***
Demographic (%)						
Ethnic Heterogeneity	-0.004	(0.002)	*	0.000	(0.001)	
Black	0.004	(0.003)		0.003	(0.001)	
Latino	-0.002	(0.002)		0.002	(0.001)	
Occupied Housing	-0.011	(0.003)	***	-0.008	(0.002)	***
Ages 5 to 14	-0.003	(0.005)		-0.012	(0.002)	***
Ages 15 to 19	0.014	(0.006)	*	0.001	(0.003)	
Land Use						
Industrial	0.006	(0.002)	**	0.004	(0.001)	***
Office	-0.007	(0.003)	**	-0.000	(0.001)	
Residential	-0.005	(0.001)	***	-0.015	(0.000)	***
Retail	0.008	(0.001)	***	0.019	(0.001)	***
Disadvantage	0.009	(0.004)	*	-0.001	(0.003)	
Home Ownership	-0.003	(0.001)	**	-0.002	(0.000)	***
Population (logged)	0.686	(0.024)	***	0.588	(0.011)	***
Demographic: 0.25 Mile Spatial Lag (%)						
Ethnic Heterogeneity	0.010	(0.002)	***	0.005	(0.001)	***
Black	0.025	(0.003)	***	0.021	(0.002)	***
Latino	0.019	(0.003)	***	0.009	(0.001)	***
Occupied Housing	-0.028	(0.005)	***	-0.011	(0.003)	***
Ages 5 to 14	0.027	(0.008)	***	-0.010	(0.003)	**
Ages 15 to 19	-0.025	(0.013)		0.006	(0.006)	
Land Use						
Industrial	0.004	(0.002)		-0.001	(0.001)	
Office	0.001	(0.005)		0.002	(0.002)	
Residential	0.002	(0.001)	*	0.008	(0.000)	***
Retail	0.003	(0.002)		0.013	(0.001)	***
Disadvantage	0.022	(0.006)	***	0.016	(0.003)	***
Stability	0.237	(0.079)	**	-0.280	(0.035)	***
Population (logged)	0.110	(0.028)	***	0.099	(0.012)	***
Constant	248.238	47.017		96.770	33.487	

Table 2.3 Negative Binomial Models Predicting Neighborhood Crime (Aggregate Crime)

	Violent			Property		
	b	SE		*b*	SE	
School Characteristics: 2-Mile Spatial Buffer						
Suspension (logged)	0.069	(0.006)	***	0.027	(0.006)	***
Expulsion (logged)	0.025	(0.005)	***	-0.028	(0.005)	***
Truancy (logged)	0.010	(0.012)		-0.025	(0.011)	*
Enrollment (logged)	-0.052	(0.072)		0.153	(0.059)	*
School Type						
Middle	-0.010	(0.006)		-0.015	(0.005)	**
High	-0.010	(0.005)	*	-0.033	(0.005)	***
Nontraditional	0.038	(0.004)	***	0.023	(0.004)	***
Demographic: Block (%)						
Ethnic Heterogeneity	-0.001	(0.001)		-0.001	(0.001)	*
Black	0.006	(0.001)	***	0.004	(0.001)	**
Latino	0.003	(0.001)	***	-0.001	(0.001)	
Occupied Housing	-0.009	(0.001)	***	-0.005	(0.001)	***
Ages 5 to 14	-0.009	(0.002)	***	-0.010	(0.002)	***
Ages 15 to 19	0.005	(0.002)	*	-0.008	(0.002)	***
Land Use						
Industrial	0.001	(0.001)		0.007	(0.001)	***
Office	-0.002	(0.001)		0.000	(0.001)	
Residential	-0.013	(0.000)	***	-0.012	(0.000)	***
Retail	0.014	(0.001)	***	0.014	(0.001)	***
Disadvantage						
Home Ownership	0.004	(0.002)		-0.002	(0.002)	
Population (logged)	-0.002	(0.000)	***	-0.001	(0.000)	
Demographic: 0.25 Mile Spatial Lag (%)	0.640	(0.009)	***	0.688	(0.008)	***
Ethnic Heterogeneity	0.002	(0.001)	**	0.005	(0.001)	***
Black	0.016	(0.001)	***	0.010	(0.001)	***
Latino	0.006	(0.001)	***	0.007	(0.001)	***
Occupied Housing	-0.016	(0.002)	***	0.001	(0.002)	
Ages 5 to 14	-0.001	(0.003)		-0.003	(0.003)	
Ages 15 to 19	0.022	(0.004)	***	-0.005	(0.004)	
Land Use						
Industrial	0.002	(0.001)		0.004	(0.001)	***
Office	-0.002	(0.002)		0.001	(0.002)	
Residential	0.005	(0.000)	***	0.003	(0.000)	***
Retail	0.010	(0.001)	***	0.008	(0.002)	***
Disadvantage	0.018	(0.002)	***	-0.012	(0.002)	***
Stability	-0.094	(0.026)	***	-0.309	(0.026)	***
Population (logged)	0.059	(0.009)	***	-0.001	(0.008)	
Constant	-4.515	-0.562	***	-4.506	-0.395	***

NOTE: N=823,301. * p < .05, ** p < .01, *** p <.001. Dummy variables for year and county are included in the models but not displayed.

Table 2.4 Negative Binomial Models Predicting Neighborhood Crime (Interactions)

	Aggravated Assault			Burglary			Larceny			Motor Vehicle Theft		
	b	SE		*b*	SE		*b*	SE		*b*	SE	
School Characteristics:												
2-Mile Spatial Buffer												
Suspension (logged)	0.081	(0.007)	***	0.033	(0.005)	***	0.054	(0.010)	***	0.028	(0.005)	***
Suspension (logged) × Disadvantage	0.008	(0.001)	***	0.002	(0.001)	*	0.004	(0.002)	**	0.002	(0.001)	
Expulsion (logged)	0.059	(0.005)	***	-0.024	(0.004)	***	-0.030	(0.006)	***	-0.079	(0.005)	***
Expulsion (logged) × Disadvantage	0.003	(0.001)	***	0.004	(0.000)	***	0.002	(0.000)	***	0.004	(0.000)	***
Truancy (logged)	0.027	(0.008)	***	-0.025	(0.006)	***	-0.030	(0.012)	**	0.019	(0.007)	**
Enrollment (logged)	-0.148	(0.032)	***	0.157	(0.030)	***	0.161	(0.056)	**	0.231	(0.030)	***
School Type												
Middle	-0.023	(0.004)	***	-0.019	(0.003)	***	-0.027	(0.005)	***	-0.012	(0.003)	***
High	-0.022	(0.003)	***	-0.031	(0.003)	***	-0.042	(0.004)	***	-0.024	(0.002)	***
Nontraditional	0.037	(0.003)	***	0.026	(0.003)	***	0.019	(0.004)	***	-0.001	(0.003)	
Demographic: Block (%)												
Ethnic Heterogeneity	-0.001	(0.001)		0.001	(0.001)		-0.001	(0.001)		0.000	(0.001)	
Black	0.008	(0.001)	***	0.002	(0.001)	*	0.004	(0.001)	**	0.004	(0.001)	***
Latino	0.004	(0.001)	***	-0.003	(0.001)	***	-0.002	(0.001)	*	0.003	(0.001)	***
Occupied Housing	-0.010	(0.002)	***	-0.008	(0.001)	***	-0.005	(0.002)	**	-0.004	(0.001)	**
Ages 5 to 14	-0.009	(0.002)	***	-0.005	(0.002)	**	-0.012	(0.002)	***	-0.017	(0.002)	***
Ages 15 to 19	0.006	(0.002)	**	-0.008	(0.002)	***	-0.007	(0.002)	**	-0.011	(0.002)	***
Land Use												
Industrial	-0.000	(0.001)		0.008	(0.001)	***	0.006	(0.001)	***	0.009	(0.001)	***
Office	-0.003	(0.001)	**	-0.000	(0.001)		-0.000	(0.001)		0.001	(0.001)	
Residential	-0.011	(0.000)	***	-0.010	(0.000)	***	-0.014	(0.000)	***	-0.007	(0.000)	***
Retail	0.009	(0.001)	***	0.011	(0.001)	***	0.016	(0.001)	***	0.012	(0.001)	***
Disadvantage	0.008	(0.002)	***	0.001	(0.001)		-0.003	(0.002)		0.002	(0.001)	
Home Ownership	-0.001	(0.000)	**	0.001	(0.000)	*	-0.001	(0.000)		-0.001	(0.000)	***
Population (logged)	0.672	(0.009)	***	0.675	(0.008)	***	0.686	(0.009)	***	0.718	(0.009)	***
Demographic: 0.25 Mile Spatial Lag (%)												
Ethnic Heterogeneity	0.002	(0.001)	*	0.007	(0.001)	***	0.006	(0.001)	***	0.006	(0.001)	***
Black	0.011	(0.001)	***	0.013	(0.001)	***	0.004	(0.002)	*	0.012	(0.001)	***
Latino	0.003	(0.001)	***	0.005	(0.001)	***	0.003	(0.001)	**	0.014	(0.001)	***
Occupied Housing	-0.018	(0.002)	***	-0.004	(0.002)	*	0.003	(0.002)		0.003	(0.002)	

Ages 5 to 14	-0.002	(0.003)		-0.003	(0.002)		-0.009	(0.003)	**	-0.008	(0.003)	**
Ages 15 to 19	0.027	(0.004)	***	-0.002	(0.004)		-0.004	(0.004)		-0.016	(0.004)	***
Land Use												
Industrial	0.004	(0.001)	***	0.002	(0.001)		0.003	(0.001)	*	0.007	(0.001)	***
Office	-0.007	(0.002)	***	-0.005	(0.002)	*	0.002	(0.002)		-0.004	(0.002)	**
Residential	0.005	(0.000)	***	0.005	(0.000)	***	0.003	(0.000)	***	0.004	(0.000)	***
Retail	0.008	(0.001)	***	0.006	(0.002)	***	0.009	(0.002)	***	0.006	(0.001)	***
Disadvantage	0.026	(0.002)	***	-0.004	(0.002)	*	-0.010	(0.002)	***	-0.000	(0.002)	
Stability	0.095	(0.025)	***	-0.202	(0.024)	***	-0.290	(0.028)	***	-0.230	(0.025)	***
Population (logged)	0.050	(0.009)	***	-0.017	(0.007)	*	-0.005	(0.008)		0.036	(0.008)	***
Constant	0.683	(0.017)	***	0.606	(0.016)	***	0.760	(0.017)	***	0.407	(0.018)	***

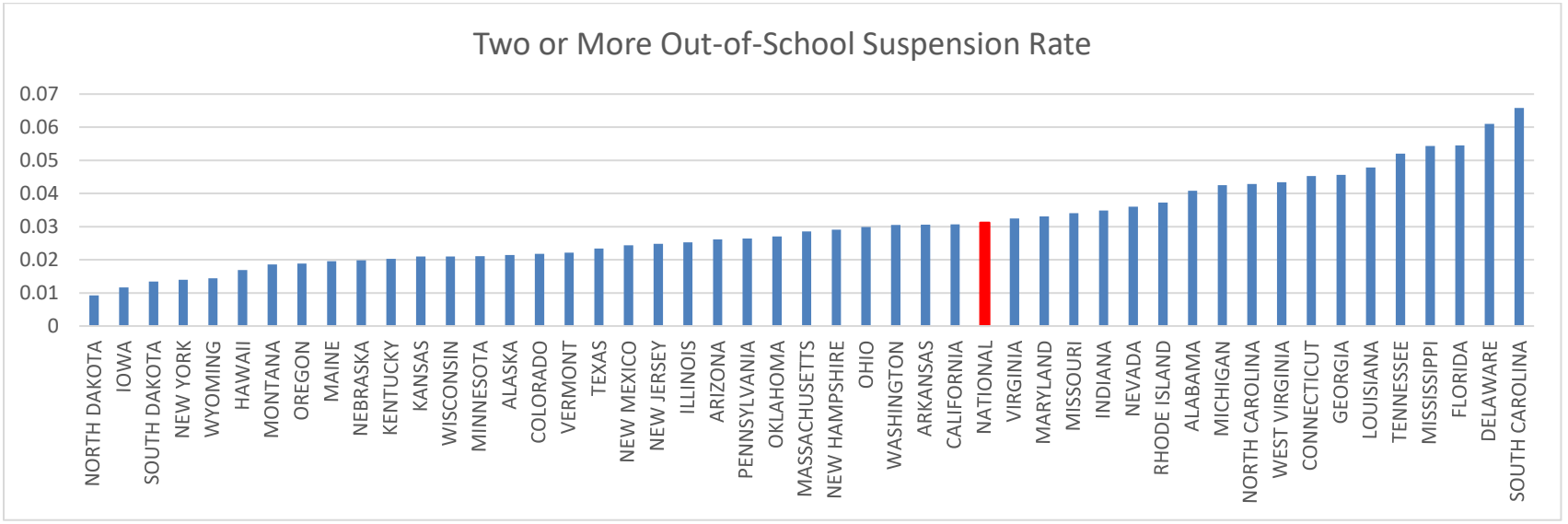
NOTE: N=823,301. * p < .05, ** p < .01, *** p <.001. Dummy variables for year and county are included in the models but not displayed.

Table 2.4 Continued

	Murder			Robbery			Violent		
	b	SE		*b*	SE		*b*	SE	
School Characteristics:									
2-Mile Spatial Buffer									
Suspension (logged)	0.005	(0.023)		0.039	(0.007)	***	0.064	(0.006)	***
Suspension (logged) × Disadvantage	0.013	(0.003)	***	0.009	(0.004)	*	0.008	(0.002)	***
Expulsion (logged)	-0.059	(0.019)	**	-0.129	(0.008)	***	0.005	(0.005)	
Expulsion (logged) × Disadvantage	-0.001	(0.002)		0.006	(0.001)	***	0.005	(0.000)	***
Truancy (logged)	-0.050	(0.021)	*	-0.013	(0.020)		0.016	(0.012)	
Enrollment (logged)	0.259	(0.061)	***	0.268	(0.113)	*	-0.031	(0.058)	
School Type									
Middle	-0.024	(0.008)	**	-0.004	(0.007)		-0.013	(0.005)	**
High	-0.009	(0.006)		-0.003	(0.005)		-0.013	(0.003)	***
Nontraditional	0.018	(0.008)	*	0.030	(0.005)	***	0.035	(0.003)	***
Demographic (%)									
Ethnic Heterogeneity	-0.004	(0.002)	*	0.000	(0.001)		-0.001	(0.001)	
Black	0.004	(0.003)		0.003	(0.001)		0.006	(0.001)	***
Latino	-0.001	(0.002)		0.002	(0.001)		0.003	(0.001)	***
Occupied Housing	-0.010	(0.003)	**	-0.008	(0.002)	***	-0.009	(0.001)	***
Ages 5 to 14	-0.005	(0.005)		-0.013	(0.002)	***	-0.010	(0.002)	***
Ages 15 to 19	0.014	(0.006)	*	0.001	(0.003)		0.005	(0.002)	*
Land Use									
Industrial	0.006	(0.002)	**	0.004	(0.001)	***	0.001	(0.001)	
Office	-0.007	(0.003)	**	-0.001	(0.001)		-0.002	(0.001)	
Residential	-0.005	(0.001)	***	-0.015	(0.000)	***	-0.013	(0.000)	***
Retail	0.008	(0.001)	***	0.019	(0.001)	***	0.014	(0.001)	***
Disadvantage	0.009	(0.004)	*	-0.000	(0.003)		0.004	(0.002)	*
Home Ownership	-0.003	(0.001)	**	-0.002	(0.000)	***	-0.002	(0.000)	***
Population (logged)	0.683	(0.024)	***	0.588	(0.011)	***	0.639	(0.008)	***
Demographic: 0.25 Mile Spatial Lag (%)									
Ethnic Heterogeneity	0.012	(0.002)	***	0.008	(0.001)	***	0.004	(0.001)	***
Black	0.026	(0.003)	***	0.020	(0.002)	***	0.015	(0.001)	***
Latino	0.021	(0.003)	***	0.010	(0.001)	***	0.007	(0.001)	***
Occupied Housing	-0.026	(0.006)	***	-0.008	(0.003)	**	-0.013	(0.002)	***
Ages 5 to 14	0.020	(0.009)	*	-0.018	(0.005)	***	-0.008	(0.003)	*

Ages 15 to 19	-0.026	(0.013)	*	0.007	(0.006)		0.022	(0.004)	***
Land Use									
Industrial	0.005	(0.002)		-0.000	(0.001)		0.002	(0.001)	*
Office	0.002	(0.005)		0.002	(0.002)		-0.002	(0.002)	
Residential	0.003	(0.001)	*	0.008	(0.001)	***	0.006	(0.000)	***
Retail	0.004	(0.002)		0.013	(0.001)	***	0.010	(0.001)	***
Disadvantage	0.016	(0.006)	*	0.019	(0.003)	***	0.022	(0.002)	***
Stability	0.241	(0.080)	**	-0.232	(0.032)	***	-0.046	(0.023)	*
Population (logged)	0.112	(0.029)	***	0.100	(0.012)	***	0.059	(0.008)	***
Constant	1.056	(0.135)	***	0.833	(0.029)	***	0.618	(0.017)	***

Figure 2.1 State and National Two or More Out-of-School Suspension Rates in SY 2009-10



DATA SOURCE: U.S. Department of Education, Civil Rights Data Collection (CRDC)

Figure 2.2 Example of 2-Mile Spatial Buffer with a Middle School (Green) and High School (Red)

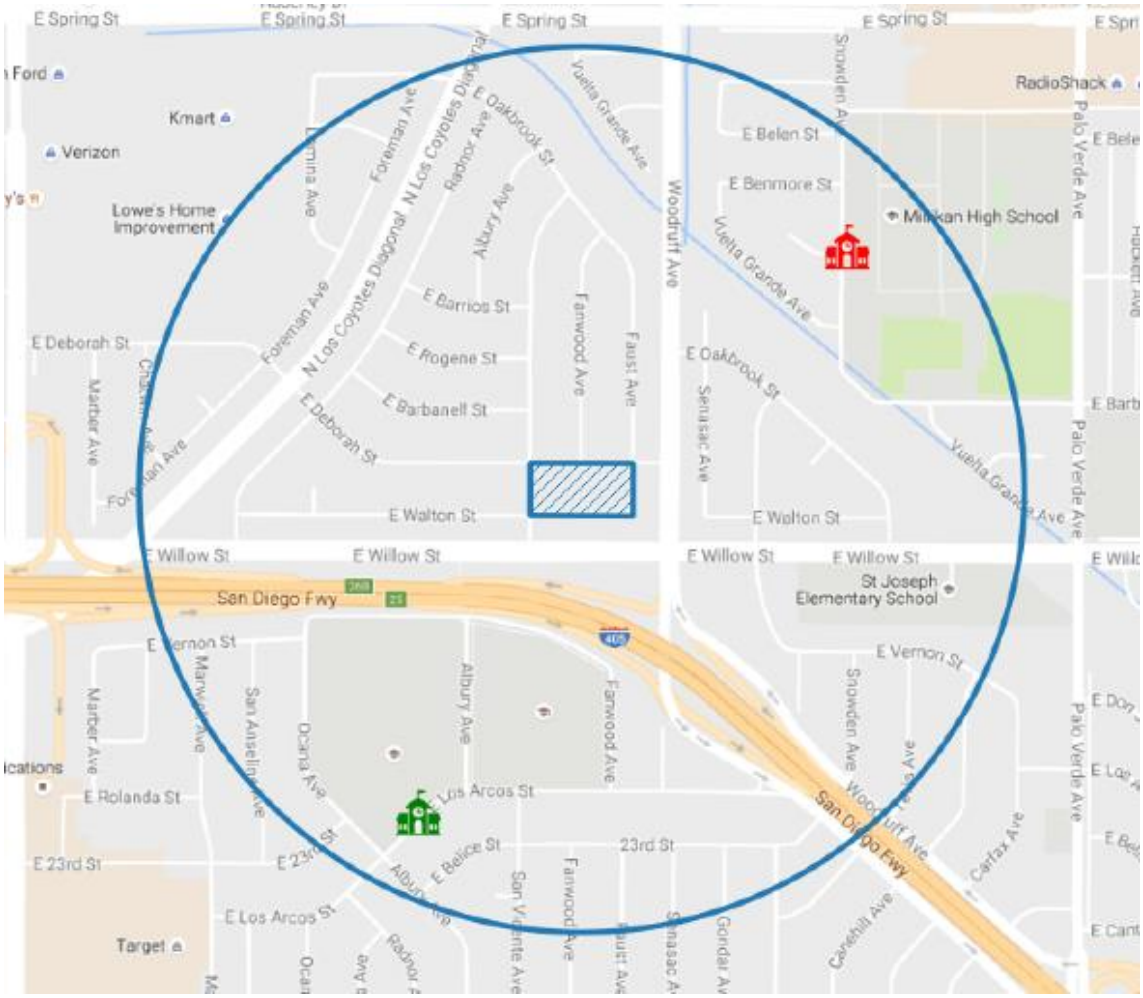


Figure 2.3 Effect of Suspensions on Aggravated Assault,
Moderated by Neighborhood Disadvantage

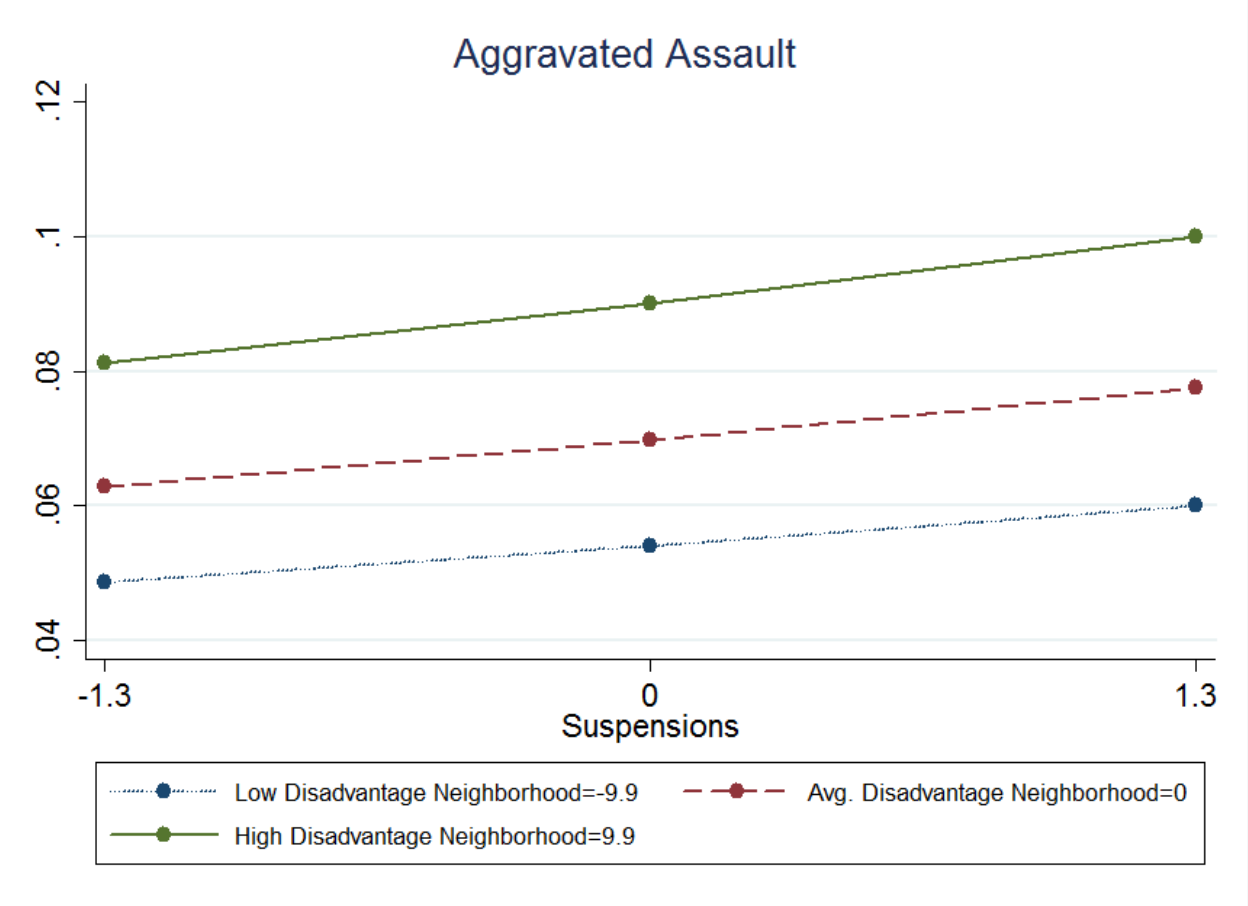


Figure 2.4 Effect of Suspensions on Murder,
Moderated by Neighborhood Disadvantage

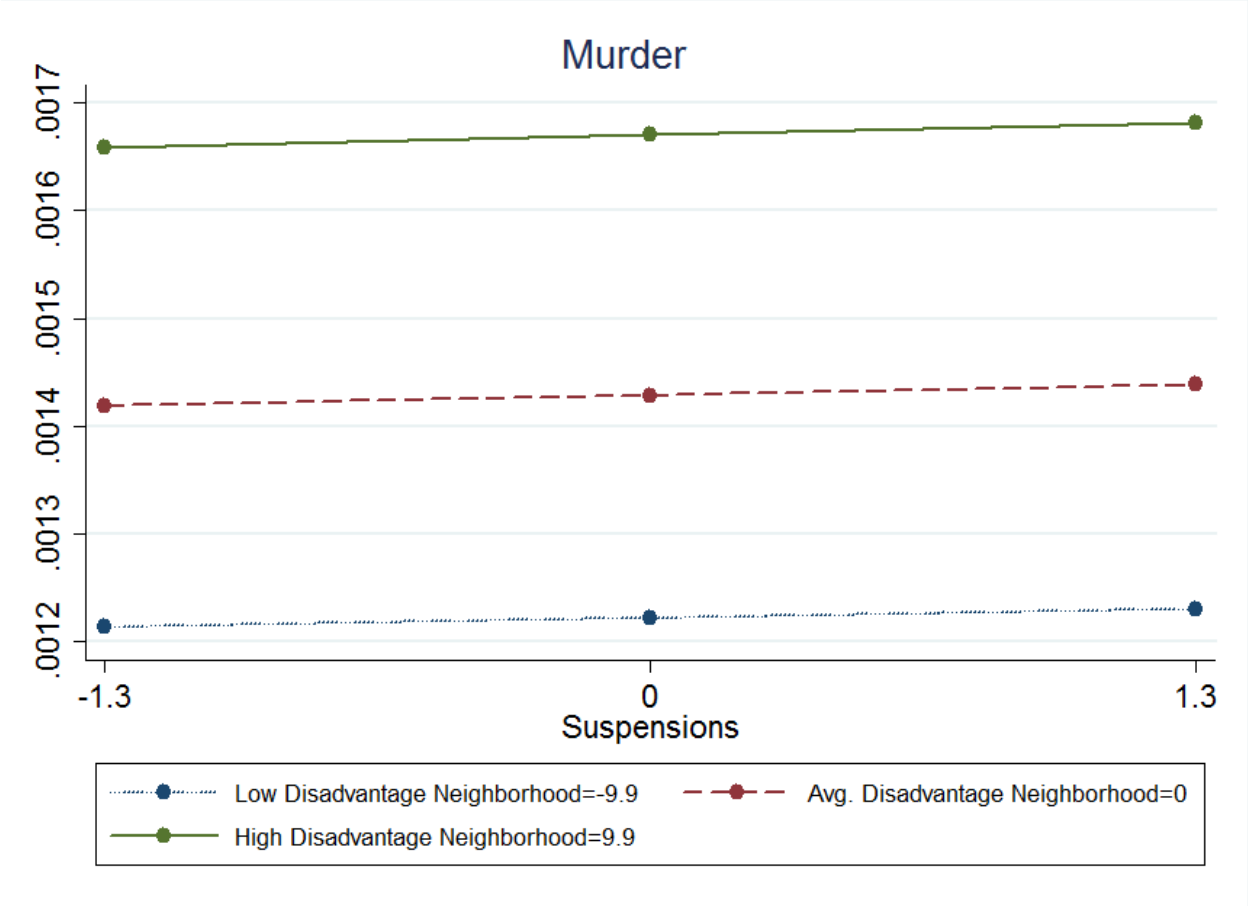


Figure 2.5 Effect of Suspensions on Robbery,
Moderated by Neighborhood Disadvantage

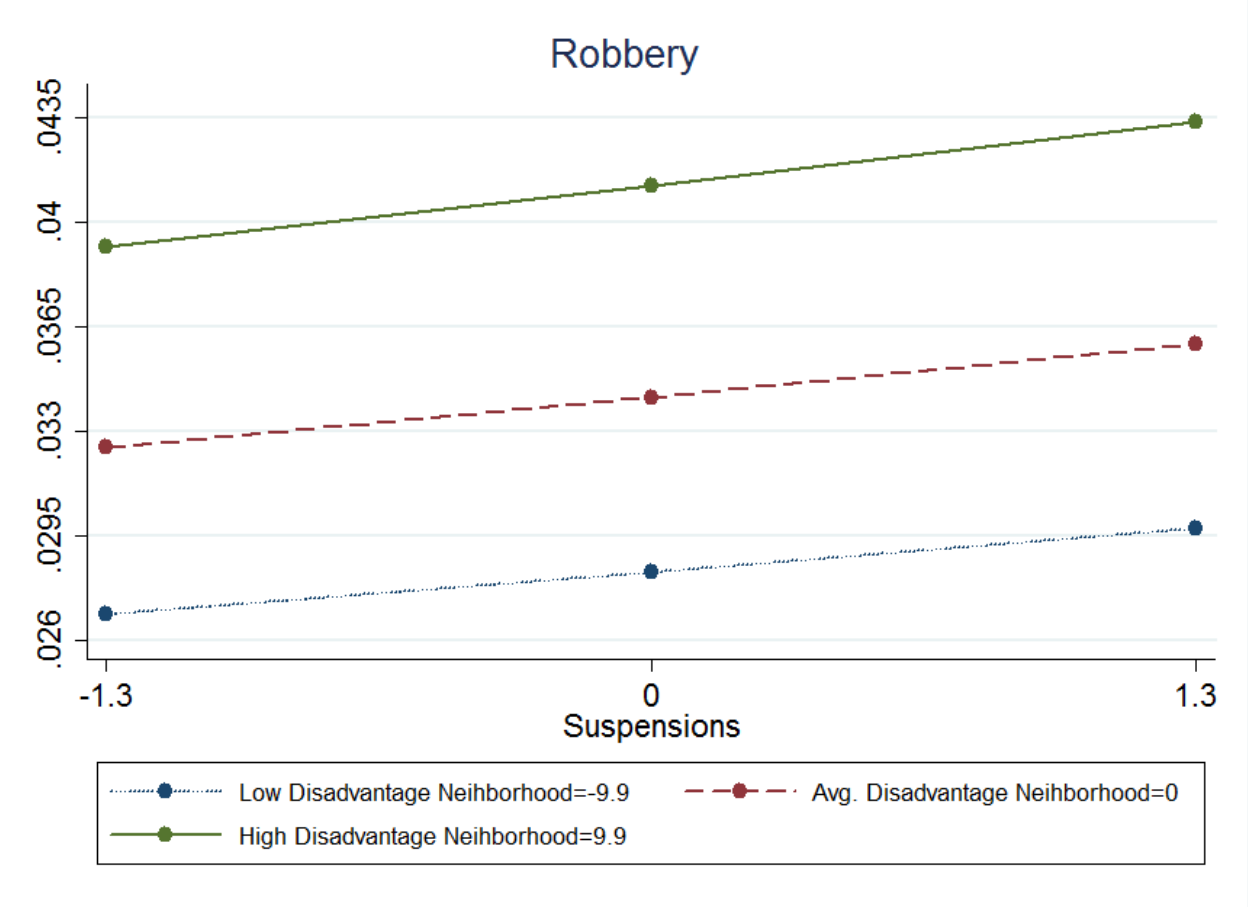


Figure 2.6 Effect of Suspensions on Burglary,
Moderated by Neighborhood Disadvantage

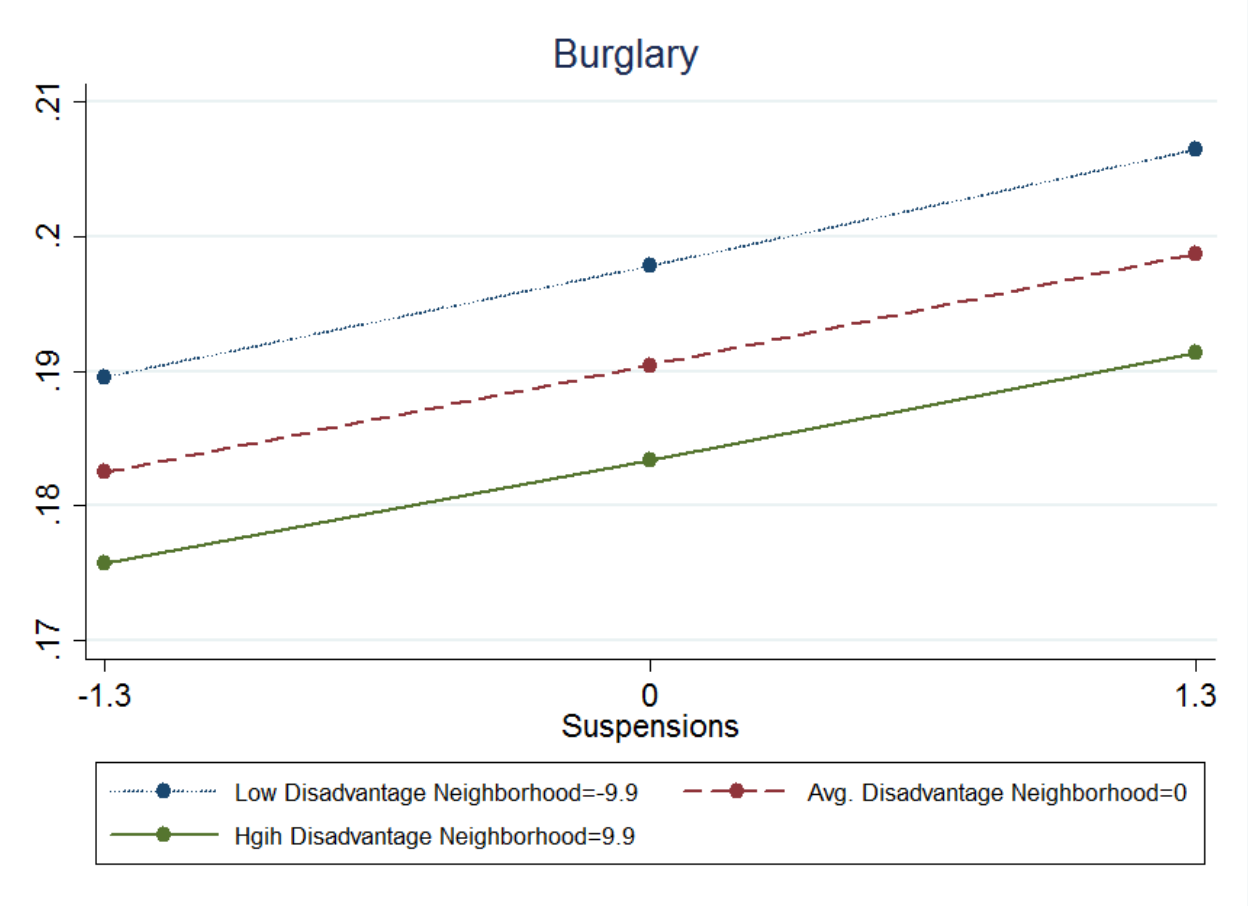


Figure 2.7 Effect of Suspensions on Larceny,
Moderated by Neighborhood Disadvantage

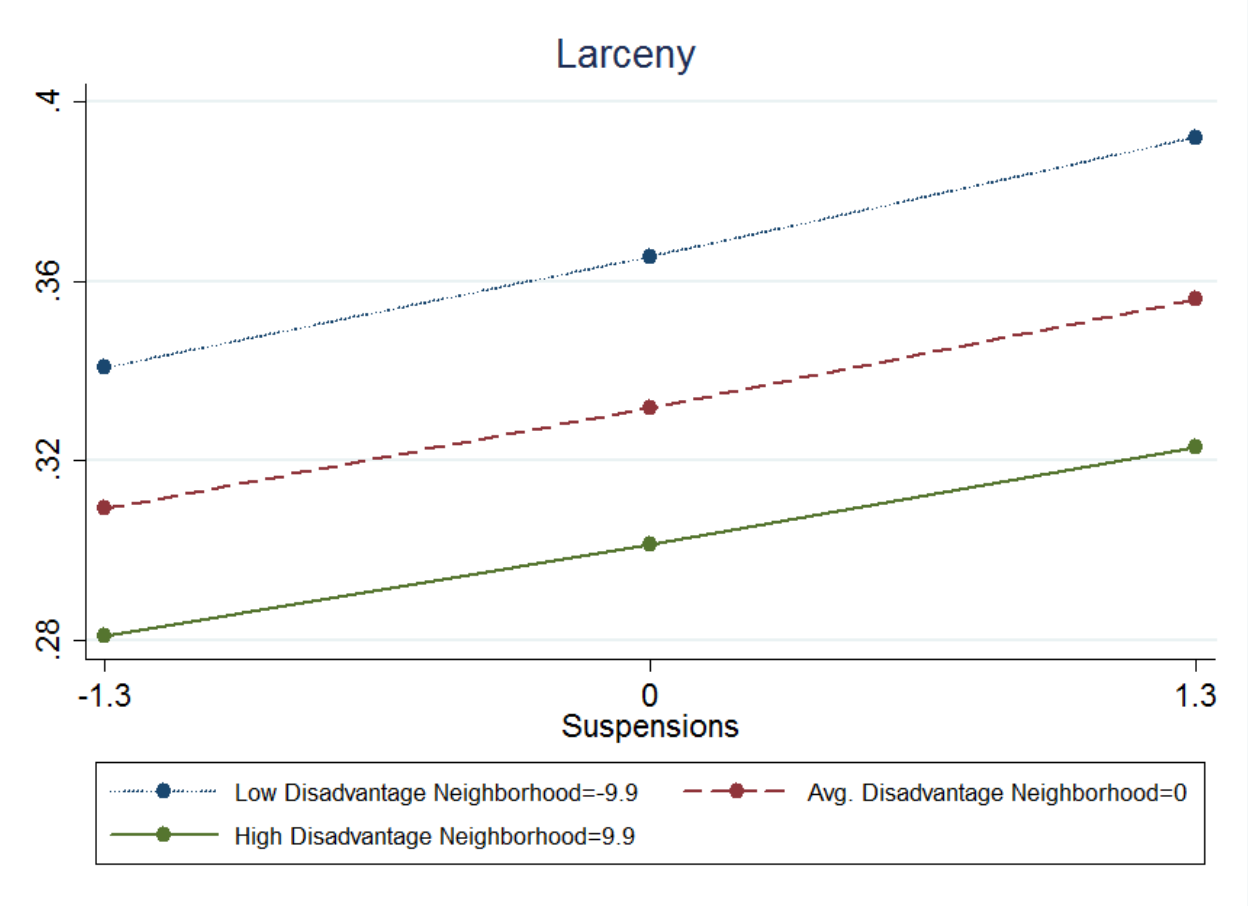


Figure 2.8 Effect of Expulsions on Aggravated Assault,
Moderated by Neighborhood Disadvantage

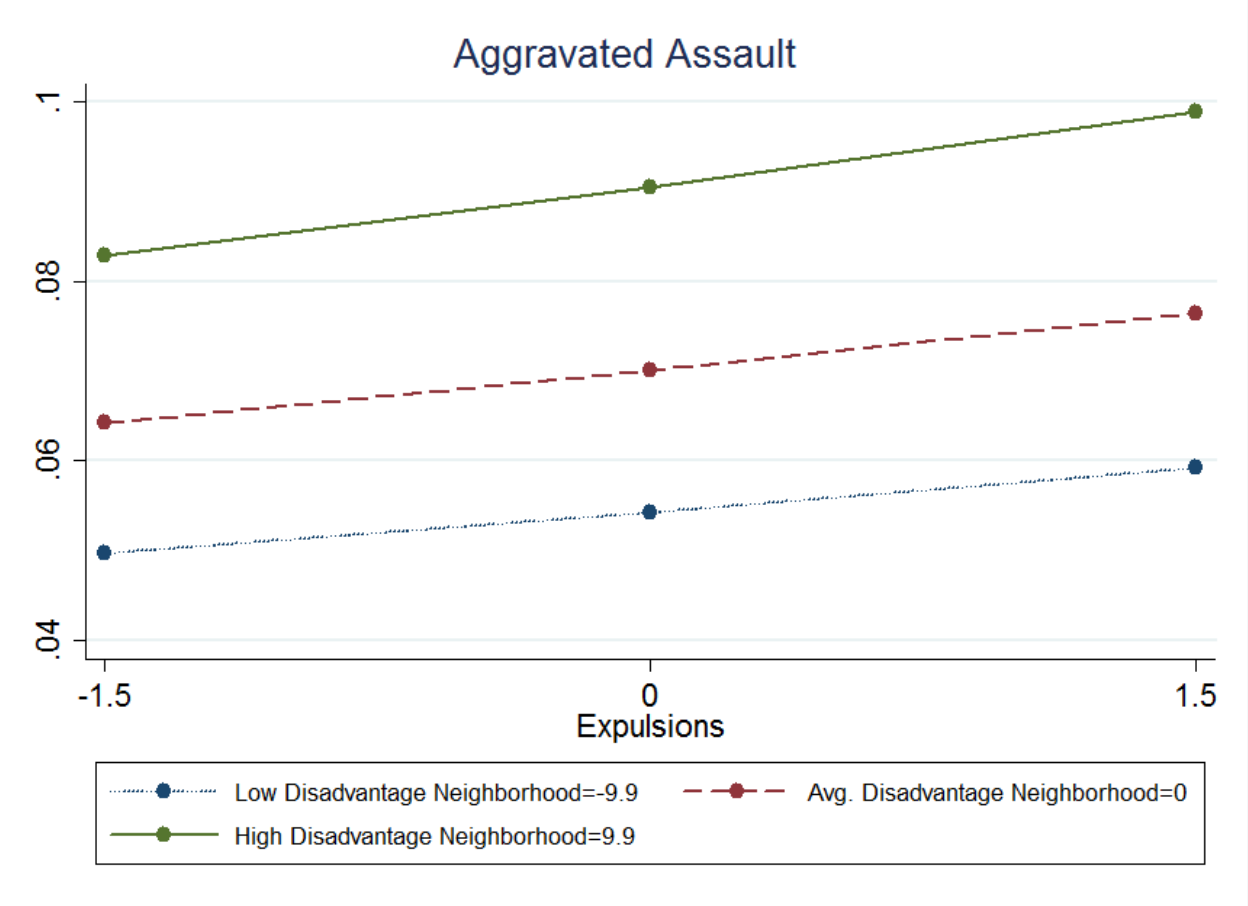


Figure 2.9 Effect of Expulsions on Burglary,
Moderated by Neighborhood Disadvantage

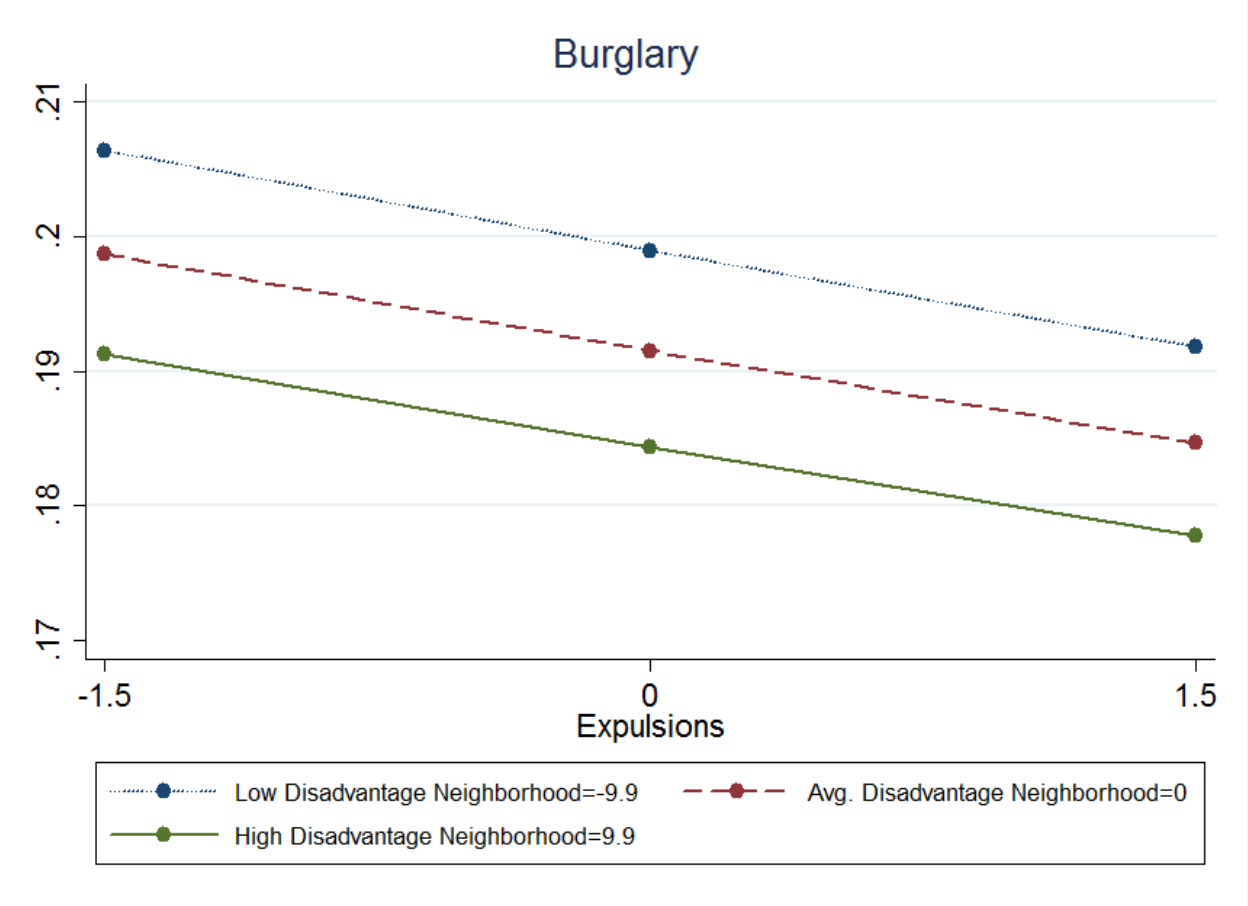


Figure 2.10 Effect of Expulsions on Larceny,
Moderated by Neighborhood Disadvantage

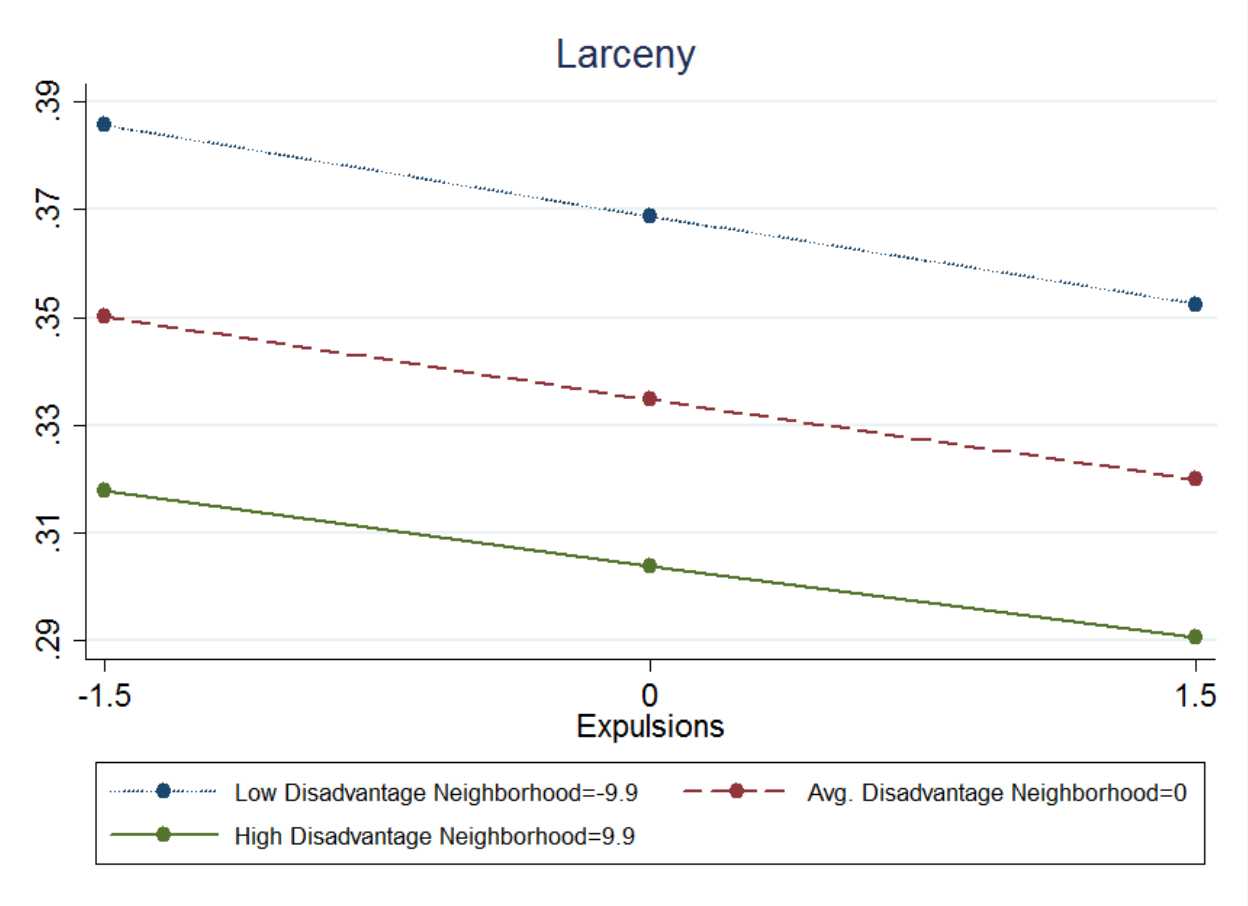


Figure 2.11 Effect of Expulsions on Motor Vehicle Theft,
Moderated by Neighborhood Disadvantage

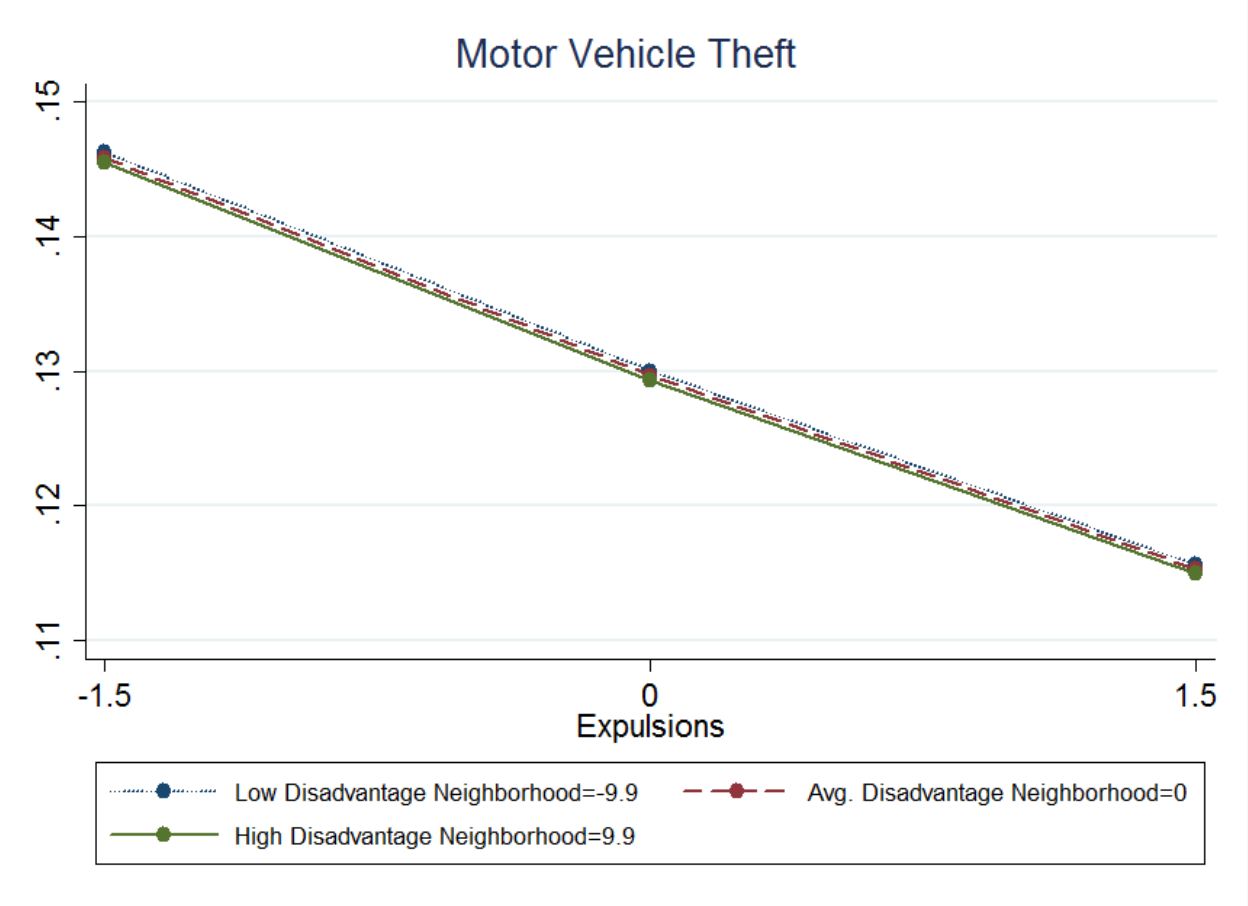
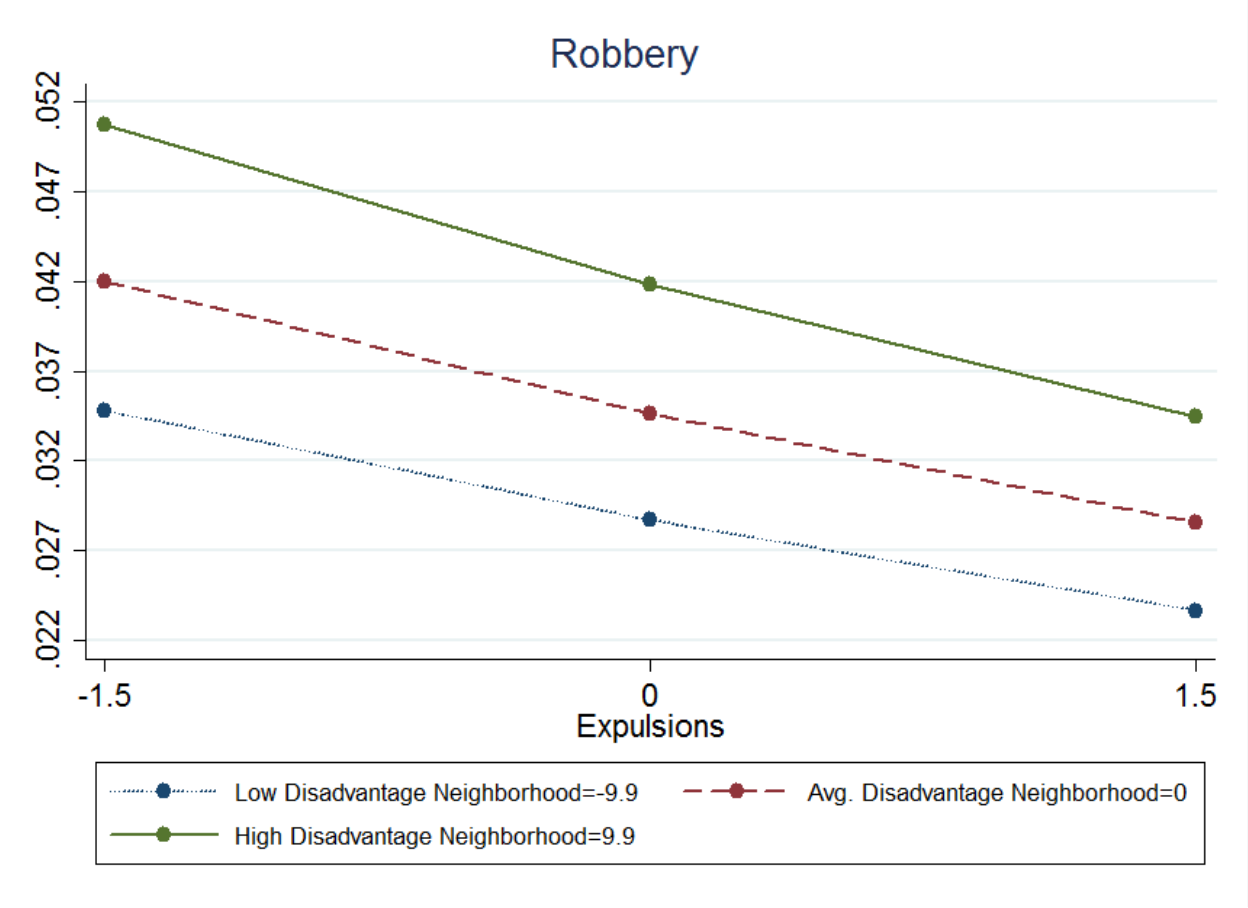


Figure 2.12 Effect of Expulsions on Robbery,
Moderated by Neighborhood Disadvantage



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CHAPTER THREE
Exclusionary Discipline and School Crime: An Analysis of the Los Angeles Unified School District

In the previous chapters, I explored the relationships between neighborhoods, schools, and school discipline. The school data utilized were at the school level for six counties in southern California, and the only race variables available were for enrollment (i.e., racial/ethnic composition). Since race is a consistently significant predictor of school exclusions, a study on school discipline is remiss to ignore racial differences. Therefore, this chapter incorporates three more components in a focused study on a single school district: suspensions by race, suspensions by violation type, and school crime. I use the Los Angeles Unified School District (LAUSD) as a research site to build on the previous two chapters by examining whether or not school exclusions impact school crime. Empirical research linking exclusionary discipline to school crime is sparse, yet whether or not the practice of temporarily removing students from school actually improves school safety has been a subject of debate for decades. This study sheds light on the efficacy of this common disciplinary practice that has been associated with numerous unfavorable outcomes, including future contact with the juvenile and/or criminal justice system.

School Security and Zero Tolerance

The transformation of school discipline and safety over the past two decades has largely mirrored the tough on crime movement. Backed by school administrators, teachers, and parents, lawmakers began to transform the physical space of the school to resemble a prison-like environment with the intention of making schools safer (Kupchik,

2010; Simon, 2009). Schools added security apparatuses – such as metal detectors, cameras, and barbed wire – while also enforcing locker and body searches and employing armed officers to patrol school grounds (Addington, 2009; Robers, Zhang, Truman, & Snyder, 2010). In 2011, about 77 percent of students aged 12 to 18 reported at least one security camera in their school, 70 percent reported the presence of security guards and/or police officers, and 11 percent observed the use of metal detectors at their schools (Robers, Kemp, Truman, & Snyder, 2013). Driven largely by a fear of violence after several devastating and highly publicized school shootings (Fox & DeLateur, 2014; Reddy et al., 2001), all schools today incorporate at least one type of security measure.

Despite the prevalent use of school security measures, research has shown that this hyper-security environment is intimidating for students (Hankin, Hertz, & Simon, 2011; Juvonen, 2001; Perumean-Chaney & Sutton, 2012) and not particularly effective in reducing school victimization (Heaviside, Rowand, Williams, & Farris, 1998; Schreck, Miller, & Gibson, 2003). In a review of the literature, only one study found that metal detectors may improve school safety by significantly reducing weapon carrying in schools (Ginsberg & Loffredo, 1993). Alternatively, Maskaly and colleagues (2011) found that increased security measures were associated with more violent crime, and there were only marginal differences between the schools with security personnel compared to those without. Using a national dataset on school victimization, Mayer and Leone (1999) reported that efforts to control school premises in a highly restrictive manner (i.e., metal detectors, locked doors, security guards, and staff patrols) were associated with higher levels of school disorder, suggesting a reciprocal, destructive relation. When security measures have been shown to increase physical safety (Garver &

Noguera, 2012), they are also associated with greater conflict between school personnel and students (Garcia, 2003; Garver & Noguera, 2012).

Along with increased security measures came a wave of deterrence-based policies requiring or recommending exclusionary discipline for a host of violations. Administrators began to rely on these policies – referred to as "zero tolerance" – which are similar to mandatory minimum drug laws in that they are designed to give equal punishment to any violation of the rules, regardless of the student's intent, the mitigating circumstances, or the situational context. A major catalyst of these policies was the Gun-Free Schools Act of 1994 – a federal law that requires any school receiving federal funds under the Elementary and Secondary Education Act to require an automatic expulsion of at least one year for any student who brought a firearm to campus. After the passage of this law, state and local educational agencies expanded their definition of weapon beyond firearms, requiring expulsions for any deadly weapon or other object that could be used as, or even resembled, a weapon. State and local education agencies then went even further, mandating or allowing exclusions for violations that range from classroom behavioral problems to serious physical assaults. Moreover, these incidents are not necessarily limited to on-campus behaviors, as students can be excluded for incidents that occur on the way to or from school or during school hours or activities. According to the Civil Rights Data Collection, 3.5 million students were suspended in-school during the 2011-12 school year; 3.45 million students were suspended out-of-school; and 130,000 students were expelled.

Discipline Disproportionality and Consequences of Exclusions

Discipline disproportionality – excluding a certain group of students at a higher rate than would be expected based on enrollment – is well documented. Black and Hispanic students, students from low-SES families, males, student with disabilities, and LGBT students are all more likely than their peers to be suspended or expelled for committing the same violations. While all of these disparities have been evidenced by multiple studies, most of the disproportionality research focuses on racial differences. For instance, using a quasi-experimental design to examine the effect of zero tolerance implementation in an urban school district, Hoffman (2014) found that the number of black students recommended for expulsion increased at a rate over four times that of Hispanic students and nine times that of white students after the policy went into effect. Additionally, black students spent roughly three times as many days suspended compared to their white classmates. These findings from a single urban school district are consistent with national discipline disproportionality results. A report issued by the Office for Civil Rights (2016) notes that black K-12 students are 3.8 times more likely to receive at least one out-of-school suspension compared to white students. Black students are also 1.9 times more likely to be expelled from school without educational services compared to their white peers.

Some scholars have argued that, like the general criminalization movement, school criminalization is most prevalent and intense in poor communities. Indeed, students from low-income families are overrepresented in exclusionary discipline (Skiba, Peterson, & Williams, 1997; Wu, Pink, Crain, & Moles, 1982). Specific to the research site of the present study, one study found that 35 percent of low-income young men in

California experienced punitive discipline compared to 24 percent of those from middle to upper-income families (Terriquez, Chlala, & Sacha, 2013). Schools with a greater percentage of poor students are also more likely to report school crime incidents to police (Irwin, Davidson, & Hall-Sanchez, 2013), forming a direct pipeline from school to prison for low-income, minority students. The interconnectedness of race and poverty in the United States makes it difficult to tease out their individual effects, but multivariate analyses have generally shown that race is a significant predictor of punitive discipline even after controlling for poverty (Noltemeyer & Mcloughlin, 2010; Skiba, Nardo, & Peterson, 2002; Wallace, Goodkind, Wallace, & Bachman, 2008). Thus, though both are significant predictors of exclusionary discipline that contribute to disproportionality, race tends to be the most robust predictor after controlling for student behavior and individual and school characteristics.

The result of school exclusions does not appear to be improved behavior or students conforming to conventional beliefs, as policymakers intended, nor is it improved academic performance for the classmates of suspended students. A recent study found that high levels of exclusionary discipline lower non-suspended students' academic achievement in both reading and math (Perry & Morris, 2014). Furthermore, these negative effects are most harmful for non-suspended students who are in otherwise safe and controlled school environments. Exclusionary discipline may therefore exacerbate adverse conditions for all students. Excluded students are significantly more likely to be held back a grade, drop out of school, and get arrested in the future. Though there are a few longitudinal studies that link exclusions to future delinquency and crime (see Mowen & Brent, 2016; Shollenberger, 2015), the largest and most comprehensive study to date

was conducted in Texas. This study used school records for all seventh-grade public school students in 2000, 2001, and 2002, tracking each student's record for at least six years (Fabelo et al., 2011), including their contact with the juvenile justice system. Students who were suspended or expelled were six times more likely to be held back a grade compared to those with no disciplinary involvement, and 10 percent of excluded students dropped out. Additionally, the researchers found that black, Hispanic and white students received discretionary discipline at significantly different rates, but exclusions for mandatory violations were comparable; minority students are subjected to exclusions at a higher rate than their white peers despite seemingly similar behaviors and actions. Excluded students were also more likely to be in contact with the juvenile justice system. After controlling for numerous school and student characteristics, the study found that students excluded for discretionary violations – which, again, tend to be black and Hispanic students – were nearly three times more likely to be in contact with the juvenile justice system the following year.

Exclusionary Discipline and School Safety

Each year, the National Center for Education Statistics, Institute of Education Sciences and the Bureau of Justice Statistics produce the "Indicators of School Crime and Safety" report. Key findings include information on violent deaths, nonfatal student and teacher victimizations, student offenses, and school discipline and security measures, among other school-related topics. According to the 2015 report, there were 31 homicides, 6 suicides, and 1 legal intervention death among school-aged youth between July 1, 2012 and June 30, 2013 (Zhang, Musu-Gillette, & Oudekerk, 2016). During this

same year, there were 1,785 homicides and 1,584 suicides among school-aged youth that did not occur on a school campus. Hence, schools are one of the safest places for youth, with both property and violent victimization declining over the past two decades (see Figure 3.1). Exclusionary discipline was prevalent during the 2013-14 school year, despite decreasing crime rates, as 3.2 million public school students received an in-school suspension and 3.4 million received an out-of-school suspension (Zhang et al., 2016). A sizeable portion of these discipline incidents (1.3 million) were related to alcohol, drugs, violence or weapons possession.

>> INSERT FIGURE 3.1 ABOUT HERE <<

One of the largest debates surrounding exclusionary discipline policies is whether or not they effectively reduce problem behaviors at school, yet research examining the effects of exclusionary discipline on school crime is limited (Cook, Gottfredson, & Na, 2010). Only a couple of studies have examined the effect of suspensions and expulsions on school violations and crime. Using the 2000 School Survey on Crime and Safety, a nationally representative sample of administrator surveys, Chen (2008) examines a "school crime model" – an expansion of the school disorder model developed by Welsh (2000) that incorporates school security and school discipline. This study finds that serious penalties for rule violations (i.e., removal without services, out-of-school suspension, and expulsion) are associated with higher numbers of criminal incidents. However, as the author notes, these findings could also be due to the reciprocal relationship between discipline and crime, whereby schools with more crime are more likely to use punitive discipline.

Another study uses a sample of middle schools in North Carolina during the

2000-01 school year to assess the impact of suspensions on student behaviors and achievement (Kinsler, 2008). The three primary findings from this study are as follows: (1) longer suspensions are associated with reduced problem behaviors in school, (2) disciplining students with out-of-school suspensions is not at the expense of academic achievement when unobservable student characteristics are considered, and (3) poorly behaved students lower the academic achievement of their peers. Interestingly, the two aforementioned studies use data during the same time period yet seem to realize opposing conclusions, though one utilizes a nationally representative sample and the other is limited to three districts in a single state. Studies that further investigate this research question would benefit from a longitudinal analysis of exclusions and school crime to assess a causal relationship between exclusions and behavior/crime.

Recent Shifts in Discipline Policy

Because of the multitude of studies exposing the unfortunate collateral consequences of exclusions, overly harsh school discipline has recently gained attention at all levels of government. In 2011, Education Secretary Arne Duncan and Attorney General Eric Holder launched the Supportive School Discipline Initiative to "coordinate federal actions to provide schools with effective alternatives to exclusionary discipline while encouraging new emphasis on reducing disproportionality for students of color and students with disabilities" (U.S. Departments of Education and Justice, 2013, p.1). Since its implementation, the federal departments have worked with numerous agencies to improve school climate and school discipline policies and practice. Their efforts to combat discipline disproportionality reduced exclusions nationwide and encouraged state

and local education agencies to follow suit. Several discipline policy reform bills have emerged recently in California and LAUSD, specifically. These bills are discussed below.

California

California's school discipline profile is reflected in Table 3.1. At present date, California only requires automatic suspensions for weapons and drug/substance use and/or possession. Expulsions are required for drug/substance violations, and it is recommended that students be expelled for weapons violations. Many of the exclusions by violation type are either permitted by state law or unmentioned in the policy, indicating potential variation at the district and school level. California also requires that schools report certain incidents (i.e., those relating to weapon and drug/substance violations) to law enforcement.

>> INSERT TABLE 3.1 ABOUT HERE <<

Over six million students are educated each year in California's K through 12 schools. Defiance is the primary reason behind high suspension rates in the state, especially for black and Latino students, who are often suspended for subjective infractions relating to disrespect, defiance, insubordination, and disobedience (Himes, 2015). In the 2012-13 school year, 42 percent of all suspensions were attributed to "willful defiance" (Freedberg, 2013) – a catchall, discretionary discipline category that explains a significant portion of disproportionality for minority students. In this same school year, 500 students were permanently expelled under this category. These numbers are shockingly high; yet, another database suggests that they might be even higher.

According to a new state education database, over half of suspensions and a quarter of expulsions were for willful defiance in 2013 (Freedberg, 2013).

Local policymakers have cited these findings in recent efforts to decriminalize school discipline in California. In 2012, Gov. Jerry Brown signed three bills calling for discipline reform, including giving administrators more discretion to use alternatives to suspension or expulsion, eliminating the $500 fine to principals for intentionally failing to file a report with local police, and prohibiting schools from refusing to enroll or readmit students because of a juvenile justice system record (American Civil Liberties Union, 2014). However, Assembly Bill 2242 – which would have removed willful defiance as a reason for expulsion or out-of-school suspension – was vetoed by Governor Jerry Brown, who stated then that he could not support limiting the authority of local school leaders (Frey, 2013). In 2015, however, Governor Brown made history as the first state to eliminate the willful defiance category for expulsion recommendations in grades K through 12 and for suspensions in grades K through 3.[67] This bill took effect on January 1, 2015.

Los Angeles Unified School District

LAUSD is the second largest school district in the country with over 640,000 students in over 900 public schools and 187 public charter schools. One of the largest challenges in the district, and a problem shared by many big-city school districts, is poverty (Krashen, 2016). LAUSD is known for its crowded classrooms, low academic performance, and high dropout and expulsion rates. In SY 2012-13, there were 37

[67] AB-420 Pupil discipline: suspension and expulsions: willful defiance. Full text here: http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201320140AB420

expulsions, 15,550 in-school suspensions, and 26,852 out-of-school suspensions under the "defiance" category in Los Angeles County.[68] That same year, the LAUSD district board passed the School Climates Bill of Rights, which eliminated the use of suspensions for all students under willful defiance – a category that includes minor rule violations such as talking back, forgetting homework, not wearing school uniform, disrupting class, forgetting to bring class materials, and so forth. After this bill went into effect, suspension rates in Los Angeles dropped from 3.5 percent to 2.8 percent and continued to drop in the 2014-15 school year (2.2 percent).[69] There are also new agreements between school policing agencies and school districts, including LAUSD, to limit the filing of criminal charges and citations against students for minor infractions and instead refer them to counseling and other support services.[70]

While these bills mark important steps towards eliminating discipline disproportionality and the overuse of exclusions, in general, there are still 23 other violations for which a student can be suspended or expelled. Notably, the School Climate Bill of Rights removed suspensions under willful defiance, but it didn't remove the "disruption" category. According to LAUSD's discipline coordinator, disruption can only be issued by an administrator for actions that affect an entire campus, such as a bomb threat (Himes, 2015). However, there were 450 suspensions issued for disruptive behavior in SY 2013-14. There were also an additional 318 suspensions under the

[68] CDE's Expulsion and Suspension Data, found here: http://www.cde.ca.gov/ds/sd/sd/filesesd.asp. Data were not available by school district.

[69] These numbers are based on an unduplicated count of suspended students; students who were suspended more than once are only counted once in the totals. Data come from the state education database, found here: http://dq.cde.ca.gov/dataquest/SuspExp/suspexplrate.aspx?cYear=201415&cType=ALL&cCDS=00000000000000&cName=Statewide&cLevel=State&cChoice=SusExpRt&ReportCode=SusExpRt

[70] Other districts that have motioned towards discipline reform include San Francisco, Oakland, Pasadena, and Azusa.

"obscenity/profanity/vulgarity" category – another seemingly mild violation that may be better handled by a non-exclusionary response. Thus, punitive discipline is a prevailing problem for many of LAUSD's students.

For the most part, the district policies reflect and refer to the state codes that authorize the district policies. Per the district handbook, the only infraction type for which a student *shall* be expelled is firearm possession or use; consequences for all other violations *may* include suspension, expulsion, or referral to law enforcement. There is a discrepancy between state and district policies regarding firearms and substance violations. California law requires exclusions for substance violations, but only suggests expulsion for weapons (though federal law requires expulsion for funding). LAUSD policies require expulsion for firearms (in accordance with federal law) and only permit exclusions for substance violations. For details on the district policies on student conduct, discipline, and related topics, see Appendix A.

The Present Study

Critics of exclusionary discipline argue that despite little to no evidence that zero tolerance improves school safety, the practice of removing students from school is commonplace. This study seeks to address this gap in the literature and provide insight on the long-debated benefits of exclusionary discipline. I use school discipline and crime data from the Los Angeles Unified School District to answer the following research question: Do school exclusions reduce school crime? This study builds on the few previous studies that attempted to answer this important question by utilizing school crime incident data as the outcome variable, as opposed to future suspensions (Kinsler,

2008) or administrator estimates of crime incidents from the previous year (Chen, 2008). I also use multiple school years to address the temporal ordering issues that exist in cross-sectional analyses. Finally, both discipline and crime data contain student information, allowing for analyses by student race and ethnicity.

DATA AND METHOD

The data utilized in this study come from various sources. School demographics, characteristics, and discipline data were retrieved from LAUSD's Office of Data and Accountability. These data were provided for school years 2001-02 to 2013-14 for all secondary schools in the district for which the Office had information. School data include the school address, enrollment, grade span, school type, and racial/ethnic composition. These data were available for 297 secondary schools. School discipline data include counts for suspensions by violation type, student ethnicity, and length of suspension in days; these data were available for 147 secondary schools in LAUSD. The Office was not able to provide expulsion data since outcomes for expulsion recommendations are decided by the school board and the Office did not have access to these outcomes. Other school data come from CDE's "Academic Performance Index" data sets, which are available through DataQuest. Variables for the percentage of students on free or reduced lunch and the Academic Performance Index (API) scores were retrieved here. The API summarizes a school's or a local educational agency's academic performance and progress on statewide assessments; scores range from 200 to 1000.

School crime data from January 2011 to March 2016 were provided by the Los Angeles School Police Department (LASPD). The LASPD is the largest independent

school police department in the U.S. with over 410 sworn police officers, 101 non-sworn school safety officers, and 34 civilian support staff. It is the fifth largest police department in Los Angeles County and the 14th largest in California. The data provided by LASPD include the following variables: involvement type (e.g., victim, suspect, arrestee, witness, etc.), sex, age, race, incident location and date, and incident description. Unfortunately, the LASPD only keeps data for five years and purges any prior records. Thus, data analyses are limited to the years for which school crime data are available. The school and crime data were geocoded in ArcGIS.

Finally, neighborhood demographic data were retrieved from the U.S. Census and American Community Survey. Block-level data that were not provided by Census were imputed using information about the block groups in which these blocks are nested using a synthetic estimation approach (see Boessen & Hipp, 2015 and the attendant "Supporting Information"). Because block-level data are not available after 2010, the 2010 estimates are used for all study years. Crime data were collected from local police agencies and were also geocoded in ArcGIS.

The final sample without missing data includes 76 middle schools, 44 high schools, and 7 nontraditional schools from school years 2010-11 to 2013-14. Nontraditional schools in this study are defined as alternative placement schools for students who have struggled in the traditional school (typically academic- or discipline-related), including continuation, community day, and opportunity schools. Special education schools are dropped from analyses because these students are protected under specific statutes that do not apply to traditional public schools. The data are structured with school blocks as the unit of analysis because crime incidents were reported by

incident location, not school, and some blocks contain multiple schools.[71] Therefore, data for blocks with more than one school were either summed or averaged based on the original variables' units.

Dependent Variables

School crime incidents involving students serve as the dependent variables for the first three sets of models. Figure 3.2 displays the average number of crimes per block with a school on it. In total, blocks with schools experience approximately 20 criminal incidents per year. The most common crime type is substance-related (about 6 per year), followed by battery (3), disturbance (2), and theft (2). For descriptions of school crime and suspension categories and school characteristics, see Table 3.2.

>> INSERT FIGURE 3.2 ABOUT HERE <<

>> INSERT TABLE 3.2 ABOUT HERE <<

Crime types are aggregated to five categories for analyses: violent, property, substance, sexual, and minor offenses. *Violent* crimes include assault, bomb threats, battery, robbery, weapon offenses, incidents resulting in injury, and murder. *Property* crimes include burglary, theft, vandalism, malicious mischief, graffiti, and other property reports. *Sexual* offenses consist of rape, unlawful sex with minor, child molestation, indecent exposure, lewd act with minor, lewd conduct, lewd literature, and obscene mail or materials. The *substance* category includes possession, sales, or manufacturing of cocaine or opium, marijuana, synthetic narcotics, dangerous non-narcotics, or drug paraphernalia, as well as driving under the influence of alcohol or drugs. Finally, the

[71] 83.4% of blocks have one school type in it, 1.2% contain a middle and high school, 0.5% contain a middle school and nontraditional school, and 14.4% contain a high school and nontraditional school.

minor offense category is a composite of the following offenses: disturbances, harassment, threats, reports by employees, status offenses, minor offenses, and trespassing.

Over 82% (15,271) of the crime incidents occurred on a block with a school. Some students, however, may be stopped by police for incidents that occurred just outside of the school. To assess how many of these incidents occurred on the blocks surrounding the school, I generated a quarter-mile spatial buffer (approximately a three-block radius) for all crime incidents. Crimes involving students of middle school age (11 to 14) were included in the buffer if the focal block contained a middle school; crimes involving students of high school age (14 to 19) were included if the focal block contained a high school or a nontraditional school. About 3% (559) of the total crime incidents occurred within the spatial buffer and matched the appropriate school level based on the students' ages. These buffer crimes were then added to the school block crimes.

>> INSERT TABLE 3.3 ABOUT HERE <<

The last model of the analyses uses suspensions from the previous school year to predict the number of student offenders. Every student involved in rule-violating incidents receives a suspension for their participation, and the same is true of students involved in criminal incidents at school. This model examines how suspensions affect the number of student offenders involved in school crime rather than the number of school crime incidents. Students may be counted more than once if they were involved in multiple incidents during the school year.

In Table 3.3, the number of crimes per year and incident rates are reported by involvement type (i.e., offender or victim), race, and gender. On average, male students commit about 15 crimes per year, per school, while females commit approximately 6 crimes. Male students are the victims of crime incidents a little more than half the time (3.85 male victims compared to 3.68 female victims). On average, Asian students have the lowest offender rate among the racial/ethnic groups (.47 incidents per year for every 100 enrolled), and black students have the highest offender rates (4.88 incidents). Asian students also have the lowest victim rates (.28 incidents), while white students have the highest victimization rates (1.76 incidents).

>> INSERT TABLE 3.4 ABOUT HERE <<

Independent Variables

The primary independent variables are student suspensions and the average number of days per suspension. Like the crime types, suspensions are aggregated to five categories. *Violent* violations include incidents involving weapons and incidents that resulted in physical injury or assault. The *property* category consists of stealing, attempting to steal, receiving, or damaging school or private property. *Sexual* violations include sexual assault and/or battery. The *substance* category is a composite of minor drug offenses and possession or sales of controlled substances. The last category is *minor* violations, which includes behavioral violations, bullying, harassment, and threats. See Table 3.4 for the average number of suspensions and rates per year for each school type by suspension violation. For middle, high, and nontraditional schools, the most common violation type is behavioral. For middle schools, the second and third most common

suspension categories are threats of harm (about 74 incidents; 3.97 per 100 students) and physical injury/assault (about 23 incidents; 1.4 per 100 students); for high schools, threats of harm (about 57 incidents; 1.97 per 100 students) and possession or sales of controlled substances (about 23 incidents; .82 per 100 students), respectively; and for nontraditional schools, possession or sales of controlled substances (about 1 incident; .76 per 100 students) and threats of harm (about 1 incident; .73 per 100 students), respectively. Finally, a measure of the average number of days per suspension for the school year is included.

Control Variables

Several school and neighborhood characteristics are included to minimize spurious results. Among the school variables are student racial/ethnic composition, school type (middle, high, or nontraditional), magnet, API, enrollment (logged), and percent on free or reduced lunch. Some studies have found that schools with more minority students are more likely to use punitive discipline (Welch & Payne, 2010); therefore, percent black, percent Hispanic, and percent white are included in the models. In some cases, as mentioned above, more than one school type is located in a single block. To control for any differences between school types, I include dummy variables for middle, high, and nontraditional schools. A dummy variable for magnet schools is also included; magnet schools are not mutually exclusive with school types.[72] I include

[72] "Magnets are established by district governing boards to achieve certain objectives, such as (1) creating a better balance in school population across a district, including overcrowding conditions and/or ethnic and racial makeup; and/or (2) to provide instruction in particular curricular areas at one or a few schools that cannot be provided at every school" (California Department of Education, 2016). Some middle and high schools in the sample are magnet schools.

the API scores to account for school performance, as schools with more high performing students might be associated with less problem behaviors overall. I also include the number of students enrolled in the school because some studies have found that larger schools are associated with higher crimes rates (Chen, 2008). The percentage of students on free or reduced lunch is used to measure student socioeconomic status, where schools with more students in the free or reduced lunch program are considered lower SES, and schools with higher student poverty levels are expected to have higher crime rates (Clark & Lab, 2000).

As shown in Table 3.5, LAUSD schools are overwhelmingly Hispanic, representing over 70 percent of the student population. The percentage of black students is between 12 and 17 percent, and white students make up approximately 7 to 10 percent. Nontraditional schools, on average, perform worse on standardized tests and are much smaller than traditional middle and high schools. At all school levels, over 70 percent of students participate in the free or reduced lunch program. Black students receive the most suspensions, with over 35 suspensions per 100 enrolled black students in middle school, 23 suspensions per 100 enrolled in high school, and 15 suspensions per 100 enrolled in nontraditional schools. White and Hispanic students receive suspensions at approximately the same rates (between 14 and 17 in middle school, about 10 in high school, and about 7 in nontraditional schools), though white students have a slightly higher rate in all school types. Asian students are suspended the least. High school students receive the longest average suspensions at 1.7 days, followed by middle school students with 1.5 days, and nontraditional schools with 1.4 days.

The neighborhood control variables include 0.25-mile spatial buffers with a distance decay function for the following measures: (percent) black, Hispanic, occupied housing, home ownership, ages 5 to 14, ages 15 to 19, and four land use measures (i.e., industrial, office, residential, and retail); ethnic heterogeneity, disadvantage, residential stability, population (logged), and property and violent crime rates.[73] Each variable is described in Chapter Two. I also include dummy variables for each year to control for variations in suspensions and/or crime due to changes in district discipline policies.

>> INSERT TABLE 3.5 ABOUT HERE <<

Analytic Strategy

This study estimates the effect of suspensions on school crime using negative binomial regression. The unit of analysis is the school block because crime data were recorded by the closest address, not necessarily the physical address of the school in which the crime occurred.[74] Therefore, school data were combined (either by averaging or summing values, depending on the unit) for blocks that contain multiple schools.

School discipline and school crime share a reciprocal relationship, at least theoretically, where schools with more crime are expected to have higher discipline rates, but schools with high discipline rates may also affect the amount of school crime. To control for the temporal ordering of the research question – do suspensions impact school

[73] Demographics for the focal block – the block containing the school – are not included in analyses due to large amounts (over 40%) of missing data. Blocks without populations (e.g., school blocks) do not contain population demographics.

[74] In a personal communication with an LASPD lieutenant (April 2016), I was informed that it would not be possible to identify the exact school with the way in which the crime data were recorded. The crime incident locations were often given a general address where the incident occurred rather than the exact school address, making it impossible to identify the school when a block contains multiple schools.

crime? – I lag the suspension data by one year. Crime data are formatted to align with the school year so that suspensions from one school year predict crime in the following school year.[75] Whereas expulsions remove students from the school permanently, suspensions allow for the same students to return to school when the discipline period is over. If exclusionary discipline, in the form of suspensions, deters students from repeating their mistakes, a reduction in crime the following school year is expected.

The analyses for this study begin by regressing each of the five crime categories, plus a total crime category, on the five suspension categories (6 models total), where the suspension categories are first included together in the models. Next, I use an aggregate school suspensions category (i.e., all suspensions) to estimate 6 more models. Then, I use suspensions for black and Hispanic students – who tend to be overrepresented in exclusionary discipline outcomes – to estimate these models again. If minority students are misbehaving at rates indicated by the number of suspensions received, then removing these students from school should result in a safer learning environment for the remaining students. However, since so many suspensions are attributed to minor behavioral issues, not serious or violent incidents, this study does not hypothesize a significant reduction in major problem behaviors, as indicated by police involvement. The general equation for these models is as follows:

$$E(y_t) = \alpha + \beta_1 \text{SUSPENSIONS}_{t-1} + \beta_2 \text{SCHOOL}_t + \beta_3 \text{WNEIGHBORHOOD}_t + \beta_4 \text{YEAR},$$

where y represents the crime incidents in that year, α is an intercept, SUSPENSIONS represents the number of suspensions and the average number of days per suspension in the previous year, SCHOOL is a matrix of the school control variables in that year,

[75] Crime data are formatted to the school year using incidents from July 1 to June 30 to form a single school year. For example, crime data from July 1, 2013 to June 30, 2014 are considered school year 2013-14.

WNEIGHBORHOOD is a matrix of the neighborhood characteristics within the 0.25-mile spatial buffer in that year, and YEAR is a matrix of year dummy variables. The fourth and last model type estimates the effect of suspensions on the number of students involved in school crime incidents. Thus, for this equation, y represents the total number of student offenders in that year.

Multiple imputation by chained equations was performed to handle missing data among the school characteristic control variables. This approach estimates a sequence of univariate regressions to generate imputations, also known as imputation via chained equations (Royston, 2004, 2009; UCLA: Statistical Consulting Group, n.d.). For this analysis, I specify five imputations for the following variables: racial ethnic composition, percent students on free or reduced lunch, enrollment, and API scores. School type, total suspension days, and number of suspensions were used to predict values among the imputed variables.[76] Multiple imputation can lead to estimates that are less biased than those resulting from complete case analysis, or even other forms of imputation, such as mean or conditional mean imputation (UCLA: Statistical Consulting Group, n.d.).[77]

RESULTS

Individual Suspension Categories

[76] I compared the averages for racial composition using a fact sheet by LAUSD, and each imputed racial group proportion was comparable to those reported by LAUSD. The fact sheet was retrieved from here: http://achieve.lausd.net/cms/lib08/CA01000043/ Centricity/Domain/32/Fingertip%20Facts2016-17_FINAL.pdf

[77] This project originally sought to incorporate school discipline policies as part of the analyses. Except for weapon and drug offenses, school principals have broad discretion on suspension and expulsion decisions for all other violations of the school code of conduct. Unfortunately, limited variation in discipline policies at the school level precludes such analyses. After collecting and coding 101 middle and high school Student/Parent Handbooks, over half of the schools referred to the district handbook, and the remaining schools made minimal additions to the district policies.

The first set of models contains the five suspension categories and is displayed in Table 3.6. The first model estimates minor crimes, such as littering and disorderly conduct. Among the primary variables of interest – the five suspension categories and the total suspension days – there are three statistically significant predictors of minor crimes: suspensions for minor, substance, and violent violations. Increases in the number of minor and violent violation suspensions are associated with more minor crime the following year ($b = .003$, $p < .001$ and $b = .003$, $p < .05$, respectively). A one standard deviation increase in minor violation suspensions increases minor crimes in the following year by 26.9%;[78] a standard deviation increase in violent violation suspensions increases minor crimes by 9.9%. Conversely, schools with more suspensions for substance-related violations tend to have fewer minor crimes in the following school year ($b = -.008$, $p < .05$), which translates to a 15.5% reduction in minor crimes with a standard deviation increase in substance suspensions.

Substance crimes are influenced by suspensions for sexual violations and the average number of days per suspension. An increase in the number of sexual violation suspensions is associated with more substance crimes in the following year ($b = .104$, $p < .01$); this is a 10.7% increase in substance crimes with a standard deviation increase in the number of suspensions for sex-related violations. In contrast, substance crimes decrease with the average number of suspension days ($b = -.266$, $p < .01$), which is a 15.2% reduction in substance-related offenses at school the following year.

The last significant result among the suspension variables is the number of property-related suspensions and total school crimes. Schools with more property

[78] Standard deviation changes are estimated using the following formula: $(\exp(b \times SD) - 1)$.

suspensions have fewer crime incidents the following year (b = -.006, p < .05), which is a 4.93% reduction in violent crimes as suspensions for property incidents increases by one standard deviation. Suspensions and the average length of suspension are not significantly related to property, sexual, or violent crimes in the following year.

>> INSERT TABLE 3.6 ABOUT HERE <<

School and neighborhood characteristics were included in the models to minimize spurious results. I begin by discussing the results for the school controls. The only school-level racial/ethnic composition variable that is statistically significant is the proportion of black students. Schools with higher proportions of black students have more minor (b = 2.921, p < .01) violent crime (b = 2.338, p < .01), and total crime incidents (b = 1.599, p < .05). The proportions of Hispanic and white students, compared to the reference category (Asian and "other" students), are not significantly related to school crime. As expected, schools with higher API scores experience less crime, and this measure of school performance is significant and negative in direction in all six models. Also as expected, larger schools have more crime, as evidenced by the variable's significance in all models. The percentage of students on free or reduced lunch, which was hypothesized to increase school crime considering the extensive literature linking poverty to crime, is not significant in any of the models. Last among the school characteristics are the school type dummies. For high schools and nontraditional schools, the reference category is the middle school. The magnet school dummy variable is not mutually exclusive, as both middle and high schools can be magnet schools. Thus, the reference category is non-magnet schools. Compared to middle schools, high schools have significantly more property (b = .616, p < .001) and substance crimes (b = .604, p <

.001), as well as more crime in general (b = .411, p < .001). In contrast, nontraditional schools experience fewer crimes than middle schools, as shown by the significant results in every model except when predicting sexual offenses. For the most part, there is no difference between the number of crimes experienced by magnet schools compared to non-magnet schools. Magnet schools are, however, less likely to experience violent crimes compared to non-magnet schools (b = -.272, p < .05).

It is plausible that characteristics of the school neighborhood may affect crime within the school; therefore, numerous neighborhood demographics are included in the models. Racial/ethnic heterogeneity, which is posited to increase neighborhood crime by decreasing social interaction (Sampson, 1991), is statistically significant and positive in direction for all models except those predicting minor and property crimes. The proportion of black and Latino residents in the surrounding neighborhood are related to two types of crime at school: minor and violent. Areas with more black residents tend to have fewer minor and violent crime incidents. The proportion of Latino residents is also negatively related to the number violent crime incidents at school (b = -1.230, p < .01). As expected, neighborhoods with more occupied housing (as opposed to empty or abandoned housing) are associated with fewer crimes (i.e., minor, sexual, violent, and total crime) at the local school. The proportion of kids and adolescents in the neighborhood is not related to crime in the local school. A few of the land use variables are also significant. Schools in areas that are more industrial or residential experience more minor, violent, and total crime. Substance-related crimes are also positively affected by neighborhoods that are more industrial. Finally, schools in neighborhoods with more retail businesses tend to have more substance and violent crimes. Neighborhood

disadvantage relates only to the number of violent crimes in the local school. Schools in neighborhoods that are more disadvantaged tend to experience more violent crime at school ($b = .038$, $p < .01$). Neighborhood stability, however, is not significantly associated with school crime, and population is negatively related to violent and total crimes. Surprisingly, the crime rate of the surrounding neighborhood only affects one of the school crime outcomes – minor offenses. Schools in areas with higher violent crime rates are associated with more minor offenses at school ($b = .053$, $p < .05$). The property crime rate is not statistically significant in any of the models.

Combined Suspensions

In the next set of models, suspensions are combined into a single measure to represent all school suspensions rather than individual categories (see Table 3.7). models. The total suspensions measure is statistically significant in every model except the models estimating sexual and violent crimes. The effect of suspensions on each crime type, as well as the total crimes measure, is the same ($b = .001$, $p < .05$); a standard deviation increase in the total number of suspensions is associated with a 14.5% increase in minor, property, substance, and total crimes at school the following year. The average number of suspension days is also significant in one model. As the average length of suspensions increases, the number of substance-related crimes decreases the following year ($b = -.244$, $p < .01$), or a 13% reduction in substance crimes with a standard deviation increase in the average length of suspensions.

There are some changes between the two sets of models among the control variables. For instance, the percentage of black students significantly predicts minor

crimes, but not sexual or substance crimes, when suspensions are grouped rather than included as individual categories. Schools with higher percentages of black students have more minor crimes ($b = 3.104$, $p < .01$). The remaining neighborhood characteristics generally have the same relationships with school crime as previously discussed, except the neighborhood violent crime rate no longer significantly predicts minor crimes at school.

>> INSERT TABLE 3.7 ABOUT HERE <<

Suspensions by Student Race and Ethnicity

Whether previous studies have assessed discipline disproportionality in a single school district or using a nationally representative sample, the findings consistently show that minority students are overrepresented in exclusionary discipline. To examine whether increased social control for minority students reduces school crime, I include suspensions by student race and ethnicity. Table 3.8 displays the results for these models. More specifically, black student suspensions, Hispanic student suspensions, and white student suspensions are included separately in the models to assess their individual contributions to school crime. The results of these models indicate that, rather than improve school safety, more black student suspensions are associated with increased crime the following year. Both minor ($b = .003$, $p < .01$; a 20% increase after a standard deviation increase in black student suspensions) and substance ($b = .002$, $p < .05$; 13.7% increase) crimes increase the following year. All control variables relate to school crime as previously described.

>> INSERT TABLE 3.8 ABOUT HERE <<

Student Offenders

The last set of models, displayed in Table 3.9, estimates the effect of suspensions on the number of student offenders involved in school crime incidents. The predictor variables for these models are the same as those in Table 3.6 – suspensions are included by violation categories. The only suspension category to significantly influence the number of student offenders is minor violation suspensions. Schools that issue high numbers of minor incident suspensions have more student offenders in the following school year. However, the average length of suspensions does not influence the number of student offenders.

>> INSERT TABLE 3.9 ABOUT HERE <<

A few of the school and neighborhood characteristics are significant. Among the school variables, the percentage of black students affects the number of student offenders, where schools with higher proportions of black students also have more student offenders ($b = 1.778$, $p < .05$). Although, it is possible that black students are both overrepresented in school crime incidents in the same way they are overrepresented in school discipline, despite similar infractions as their white peers. Academic performance, school size, and school type all relate to the number of student offenders as the previous models predicting school crime incidents. Among the neighborhood controls, only racial/ethnic heterogeneity ($b = 1.044$, $p < .01$), percent occupied housing ($b = -5.002$, $p < .05$), and the proportion of land that is industrial ($b = 3.788$, $p < .05$) or designated to offices ($b = -2.040$, $p < .05$) in the surrounding neighborhood are significantly associated with the number of student offenders in the local secondary school.

DISCUSSION

This paper sought to evaluate the effects of suspensions on school crime. It was hypothesized that student suspensions – which have been linked to increased delinquency in previous studies – would not reduce school crime. The results from the present study not only support this hypothesis, they actually show that suspensions are associated with more crime in the following school year. Moreover, punitive social control for black students also increases crime the following year, and suspensions for minor infractions increase the number of student offenders. There were a few suspension categories that were significantly related to crime, though more than half (3/5) were positive rather than negative in direction. A discussion of these significant results follows next.

All five types of violations that resulted in suspension affect school crime in the following year, but only one was significant within the same category of crime. Suspensions for minor and violent offenses increase minor crimes, and suspensions for sexual offenses increase substance-related crimes in the following school year. An analysis of individuals is necessary to directly link suspensions with crime, but the results from this study indicate that suspensions for these violations do not prevent these incidents from reoccurring in the future. In fact, suspensions for these violations have the opposite of the intended effect by increasing crime in other categories the next year. Since both minor and violent violation suspensions – arguably the least and most serious categories – increase low-level offenses, suspensions in general do not appear to curb crime. Furthermore, suspensions were not significantly associated with violent crime in

any of the models, though this is likely one of the most serious issues for administrators. Based on these findings, suspensions are not an effective method for crime control.

The complexity of sex crimes among adolescents makes it unlikely that school removal alone will alter an individual's behavior. A better predictor of sex crimes that occur at school may be school resources, such as sex offense awareness and prevention programs or counseling services provided by trained staff that focus on this specific issue. Schools that deal with student sexual offenses are encouraged to try these alternatives to punitive discipline, when appropriate, to make the necessary changes to these types of behaviors. Students must learn from their mistakes, especially understanding why certain behaviors are unacceptable, in order to avoid repeating past behaviors.

Property and substance suspensions reduce school crime. Suspensions for property violations reduce crime, in general, and suspensions for substance-related violations reduce minor crimes in the following school year. Because suspensions are temporary removals from school, it is assumed that most of these suspended students return to school at some point during the school year, or at least by the following school year. Thus, removing students from school for short periods for property and/or drug and alcohol violations appears to curb future criminal behaviors. If the reduction in crime is due to a change in the criminal trajectories of suspended students, then it appears that suspensions effectively reduce school crime. Again, a follow-up study that assesses individuals would help make this connection clearer. Interestingly, suspensions for substance violations do not impact substance-related crime in the following school year. Either new students become involved with substances each year despite the school's attempt to prevent it with strict school policies or the enforcement of exclusionary

discipline, or suspending students for substance-related violations has no effect on their future involvement with illegal substances. This process should be investigated in future studies.

Schools with longer average lengths of suspension experience fewer substance crimes the following year. However, longer suspensions translate to more time away from classroom instruction and a greater chance of falling behind in school. Previous studies have demonstrated a direct connection between exclusions and lowered school performance and achievement, as well as between exclusions and increased delinquency and crime, so it is probable that longer suspensions put students at a disadvantage they are not able to overcome once they return to school. These students may then lose interest in school as they struggle to keep up with their peers and instead turn to more deviant behaviors that are not contingent upon school success. Schools that use frequent and multi-day suspensions to emphasize the seriousness of the punishment are doing an irreparable disservice to the student. As noted earlier, California and LAUSD have implemented zero tolerance policies to combat youth substance problems at school, but these deterrence-based policies have historically had little impact on student behaviors, which is not too surprising considering the failure of strict sentencing in the criminal justice system. Moreover, a recent study that examined alcohol, tobacco, and other drug (ATOD) education in schools found that ATOD curriculum requirements significantly reduced alcohol and marijuana use among adolescents (Carpenter et al., 2017), making education-based prevention programs – as opposed to punitive responses to student behaviors – an effective and inexpensive option for schools.

Minority students are almost always overrepresented in exclusionary discipline. If these students are truly more problematic than their peers, then it should be the case that more minority exclusions reduces school crime. Instead, this study found that suspending black students results in more school crime the following year. It appears these students are forced out of school at a higher rate than would be expected based on enrollment with no apparent improvements to school safety. Alternatively, expulsions – not suspensions – may be more likely to affect school crime because these students are permanently removed from school and cannot return the following year. Unfortunately, expulsion data were not available for LAUSD during the study period, but analyses that focus on the effect of expulsions on school crime would make apposite contributions to the current debate. The present study, however, reveals that the frequent, temporary removal of black students from school has the unintended effect of increasing school crime. School administrators should carefully weigh the benefits of exclusionary discipline against increased future crime and a disrupted academic path for millions of students nationwide.

The number of minor violation suspensions is associated with more student offenders the following school year. Whereas crime incidents count as one crime regardless of the number of students involved, this measure considers the number of students committing crime at school. The threat of punishment for breaking school rules is directed towards all students; therefore, the number of students who participate in crime at school is just as interesting as the number of incidents. However, this study found that instead of deterring more students from violating school rules, punitive responses to minor incidents significantly increases the number of student offenders the following school year.

A few school and neighborhood control variables had interesting relationships with school crime. For instance, the only school racial/ethnic composition variable that is associated with school crime is the percentage of black students, where higher proportions of black students relate to more crime incidents at school. As exhibited in Chapter One, social control mechanisms issued by school authorities, including the officers presiding over LAUSD schools, may be based on inherent biases and perceptions of minority student behaviors. Whether or not minority students are committing more school crimes compared to their peers is beyond the scope of this study, but future analyses should focus on criminal trajectories following exclusion and how race and ethnicity factor into this phenomenon.

Another interesting finding among the control variables is the lack of association between poverty/disadvantage (at the school and neighborhood level) and school crime. Only violent school crimes are influenced by the level of neighborhood disadvantage, where schools in disadvantaged areas experience more violent crime than schools in more affluent neighborhoods. This is a particularly notable finding because violent school crimes were unaffected by suspensions, school disadvantage, and neighborhood crime rates. Unfortunately, schools in poorer neighborhoods typically have fewer resources and services for students, which might explain why these schools experience more violent crime incidents. If state or local education agencies are able to allocate school resources to target school violence, it is recommended that they target schools in disadvantaged neighborhoods first.

Finally, neighborhood crime is not a significant predictor of school crime. Some studies have found that the same social ills that plague the neighborhood can infiltrate the

school (Boggess, 2016; Bowen, Bowen, & Ware, 2002; Gottfredson & Gottfredson, 1985), especially because schools typically enroll students who live locally. However, with the exception of more minor offenses at school, the present study did not find that neighborhood crime influences school crime. It seems that between increased security measures and close supervision during classroom hours, the routine social control mechanisms in schools are more effective than day to day monitoring and crime prevention strategies in the neighborhood – another reason to prioritize keeping students in school during periods of discipline.

Limitations

The primary limitation of this study is that it does not lend to comments about student criminal trajectories. While the overall school crime incidents may be affected by the number of suspensions, it is not clear whether the same suspended students are committing crimes at school the following year. This study sought to examine whether suspensions improve school safety, but future studies may want to investigate whether and how often suspended students are involved in school crime.

A second limitation deals with available data and potential omitted variables. For instance, measures on services, resources, and school climate may influence school crime but were not available. School policies or crime prevention efforts, such as security measures and school resource officers, might also affect school crime. Additionally, expulsion data were not provided by LAUSD but would benefit this study in an important way. Suspended students presumably return to school following the exclusion period; however, expelled students are removed for longer periods and typically do not return to

the same school after. Thus, it is possible that expulsions decrease school crime by permanently removing the most serious offenders. A follow-up study using expulsion data would greatly contribute to the discussion on exclusionary discipline and best practices. Lastly, the present study was limited by accessible school discipline and crime data. A sizeable portion of schools in LAUSD did not submit discipline data, and school crime data were only available for the last five years. Expanding the sample to include more schools in California, particularly more nontraditional schools, would provide more generalizable results.

CONCLUSION

As LAUSD turns away from exclusionary discipline for minor behavioral infractions, this study questions whether school removal in general is a viable form of punishment if the goal is to improve school safety. The latest numbers from LAUSD show that there were over 6,100 students suspended in the 2014-15 school year (California Department of Education, n.d.), which is a year after the policy removing "willful defiance" went into effect. Another 94 students were expelled during that year. Of course, removing dangerous and menacing students is necessary to ensure the safety and success of rule-abiding students – a sentiment shared by teachers, administrators, and parents alike, regardless of their positions on exclusionary discipline as a common practice. In reality, however, the majority of suspended students are neither dangerous nor menacing, punitive discipline appears to increase future problem behaviors, and there is no evidence that suspensions have any effect on the most serious offenses.

Table 3.1 California School Discipline Laws by Infraction Type, 2017

Violation Type	Suspension	Expulsion	Report to Law Enforcement
Alcohol	Permitted	Permitted	--
Behavioral	Grades 4+ only	Eliminated	--
Drugs	Required	Required	Required
Property	Permitted	Permitted	--
Sexual harassment	Permitted	Permitted	--
Substances	Required	Required	Required
Tobacco	Permitted	Permitted	--
Violence	Permitted	Permitted	--
Weapons	Required	Recommended	Required

Table 3.2 Summary of Variables

Variable	*Description*	*Measurement*
School Characteristics		
Race/ethnicity	Racial/ethnic composition of student body (%)	0-100
Academic Performance Index	Scores are based on test results of the Standardized Testing and Reporting (STAR) Program, the California High School Exit Examination (CAHSEE), and the California Alternate Performance Assessment (CAPA)	200-1000
Enrolled	Number of students enrolled	Count
Free or reduced lunch	Students on free or reduced lunch (%)	0-100
Suspensions		
Violations		
Behavioral/minor	Composite variable of the following violations: violation of bus rules, disruption/willful defiance, obscenity/profanity/ vulgarity, disrupted school-wide activities	Count
Bullying	Composite variable of the following violations: bullying/cyber based on sex, race, disability, other factors, and school personnel	Count
Weapon or explosive	Composite variable of the following violations: firearm, imitation firearm, brandished knife as weapon, explosive, knife/explosive/dangerous object, and knife or other dangerous object	Count
Harassment	Composite variable of the following violations: hazing, harassed/threatened/intimidated pupil, school personnel, or district employee on the basis of race, disability or other factors, sexual harassment, and harassed/threatened/intimidated witness	Count

Minor drug offense	Composite variable of the following violations: possession marijuana 1st offense < 1 oz or alcohol, possessed or used tobacco, and drug paraphernalia	Count
Physical injury/assault	Composite variable of the following violations: serious physical injury/not self-defense, assaulted/battered school employee, hate violence, willful use of force/violence not self-defense, caused physical injury, attempted to cause physical injury, aided or abetted the infliction of physical injury	Count
Possession or sales of controlled substances	Composite variable of the following violations: sold controlled substance, substitute of a controlled substance, and controlled substances except 1st marijuana < 1 oz and counter/prescription drugs	Count
Robbery	Robbery/extortion	
Threats of harm	Composite variable of the following violations: threatened/caused/attempted physical injury, terrorist threat (threat to cause death, great bodily harm), threatened to cause physical injury	Count
Aggregate suspension categories		
Minor	Composite variable of the following violations: behavioral, bullying, harassment, and threats	Count
Property	Composite variable of the following violations: stole, attempted to steal, received, or damaged school or private property	Count
Sexual	Composite variable of the following violations: sexual assault/battery, sexual assault, sexual battery	Count

Substance	Composite variable of the following violations: minor drug offense and possession or sales of controlled substance	Count
Violent	Composite variable of the following violations: weapon and physical injury/assault	Count
Suspensions per 100 enrolled	Total school-year suspensions per 100 students enrolled	(Suspensions/ Enrolled) × 100
Average length of suspension	Average length of suspension in days	Days/Suspensions
Student Crimes		
Offenses		
Assault	Composite variable of the following offenses: assault with a deadly weapon/attempted murder and caustic chemical/assault	Count
Battery	Battery	Count
Bomb threat	Bomb threat	Count
Burglary	Burglary - residential, commercial	Count
Disturbance	Composite variable of the following offenses: disturbing the peace, disruption	Count
Employee	Employee report	Count
Firework	Fireworks, possession	Count
Harassment	Annoying phone call, text messages	Count
Hate crime	Hate incident	Count
Injury	Injury report	Count
Minor	Composite variable of the following offenses: resist/obstruct/impersonate police officer, disorderly conduct, urinating in public, littering, and probation violation	Count
Murder	Murder and non-negligent manslaughter	Count

Robbery	Composite variable of the following offenses: carjacking/robbery, extortion/robbery, and robbery	Count
Status	Composite variable of the following offenses: curfew, truancy, and minor possessing false ID to buy alcohol	Count
Theft	Composite variable of the following offenses: driving without owner consent, stolen vehicles/theft, theft from vehicle, stolen plates, and theft-grand and larceny	Count
Threats	Criminal threats	Count
Trespassing	Trespassing	Count
Weapon	Weapons - carry, possess, sell, manufacture, or furnish	Count
Aggregate crime categories		
Minor	Composite variable of the following offenses: disturbance, harassment, threats, employee reports, status, minor, and trespassing	Count
Property	Composite variable of the following offenses: burglary, theft, vandalism, malicious mischief, graffiti, and property report	Count
Sexual	Composite variable of the following offenses: rape, unlawful sex with minor, child molestation, indecent exposure, lewd act with minor, lewd conduct, lewd literature, obscene mail or materials	Count

Substance	Composite variable of the following offenses: possession of cocaine or opium, marijuana, synthetic narcotic, dangerous non-narcotic, or drug paraphernalia; sales or manufacturing of coke/opium, marijuana, synthetic narcotic, or dangerous non-narcotic; driving/ under influence of drugs or alcohol	Count
Violent	Composite variable of the following violations: assault, bomb threat, battery, robbery, weapons, incidents resulting in injury, and murder	Count

Table 3.3 Student Involvement Status

	Average per Year	Incidents per 100 Enrolled[a]
Student Offenders		
Gender		
Male	15.25	--
Female	5.97	--
Race/Ethnicity		
Asian	0.12	0.47
Black	4.90	4.88
Hispanic	14.58	1.45
Other	0.27	3.14
White	0.63	1.73
Student Victims		
Gender		
Male	3.85	--
Female	3.68	--
Race/Ethnicity		
Asian	0.16	0.28
Black	1.44	1.25
Hispanic	4.59	0.49
Other	0.13	1.38
White	0.56	1.76

NOTE: Rates could not be generated by gender because counts were not available.

[a] Rates are based on within race counts, e.g., there are .47 crimes committed in each school per year by Asian students for every 100 Asian students enrolled.

Table 3.4 Suspensions per School by School Type

	Middle		High		Nontraditional	
	Count	Rate	Count	Rate	Count	Rate
Behavioral/minor violations	136.97	7.28	179.94	6.22	4.66	4.52
Bullying	0.06	0.01	0.04	0.00	0.00	0.00
Weapon or explosive	10.81	0.60	6.64	0.23	0.16	0.15
Harassment	10.69	0.61	4.33	0.19	0.28	0.29
Minor drug offense	3.86	0.23	11.29	0.41	0.38	0.42
Physical injury/assault	22.89	1.40	15.69	0.66	0.39	0.74
Possession/sales of controlled substances	7.00	0.42	22.86	0.82	1.00	0.76
Sexual	0.65	0.04	0.39	0.02	0.00	0.00
Robbery	1.23	0.07	1.14	0.04	0.04	0.04
Threats of harm	73.76	3.97	56.64	1.97	0.95	0.73

NOTE: Values are averages per year. Rates are based on number of suspensions per 100 students enrolled.

Table 3.5 Characteristics by School Type

	Middle	High	Nontraditional
Race and Ethnicity			
Percent Asian	6.5	6.1	1.7
Percent Black	12.0	12.6	16.6
Percent Hispanic	70.9	73.7	73.8
Percent Other	0.7	0.7	0.8
Percent White	10.0	6.9	7.2
Characteristics			
Academic Performance Index	649	618	507
Enrollment	1701	2396	144
Percent Free or Reduced Lunch	76.3	74.9	71.5
Suspensions			
Number of Suspensions	306.0	337.9	6.5
Asian	4.5	4.2	0.0
Black	71.7	62.8	0.2
Hispanic	173.3	150.6	0.4
Other	2.0	1.7	0.0
White	14.4	12.7	0.0
Suspensions per 100 Enrolled[a]	18.0	14.1	4.5
Asian	6.8	5.1	7.3
Black	35.7	22.8	15.4
Hispanic	14.4	10.3	6.8
Other	19.4	12.3	1.5
White	16.9	10.4	7.0
Number of Suspension Days	430.8	495.4	11.9
Average Length of Suspension (in days)	1.5	1.7	1.4

NOTE: Values are averages per year.

[a] Rates are based on within race counts, e.g., there are 6.8 Asian students suspended in each school per year for every 100 Asian students enrolled.

Table 3.6 Negative Binomial Regression Models Predicting School Crime, Individual Suspension Categories

	Minor			Property			Sexual			Substance		
	b	SE		*b*	SE		*b*	SE		*b*	SE	
Suspensions$_{(t-1)}$												
Minor	0.003	0.001	***	0.001	0.001		0.000	0.001		0.001	0.001	
Property	-0.009	0.007		-0.003	0.007		0.006	0.011		-0.009	0.007	
Sexual	0.039	0.042		0.046	0.043		0.096	0.051		0.104	0.036	**
Substance	-0.008	0.003	**	-0.002	0.003		-0.001	0.003		0.001	0.002	
Violent	0.003	0.002	*	0.003	0.002		0.000	0.002		0.002	0.001	
Average Suspension (Days)	0.016	0.102		-0.046	0.107		0.017	0.139		-0.266	0.093	**
School Characteristics												
Percent Black	2.921	1.036	**	1.195	1.010		1.234	1.475		-0.568	0.877	
Percent Hispanic	1.685	1.017		0.947	0.999		0.835	1.407		-0.110	0.860	
Percent White	-0.540	1.199		1.342	1.168		0.521	1.657		0.162	1.061	
Academic Performance Index	-0.002	0.001	**	-0.003	0.001	***	-0.002	0.002		-0.004	0.001	***
Enrollment (logged)	0.688	0.142	***	0.708	0.141	***	0.590	0.215	**	0.898	0.150	***
Percent Free or Reduced Lunch	-0.009	0.005		-0.002	0.005		-0.009	0.008		0.006	0.005	
School Type[a]												
High	0.243	0.132		0.616	0.138	***	-0.246	0.227		0.604	0.135	***
Nontraditional	-0.581	0.154	***	-0.544	0.149	***	-0.299	0.228		-0.633	0.139	***
Magnet	-0.209	0.167		0.049	0.158		-0.290	0.267		0.139	0.144	
Neighborhood Characteristics: 0.25-Mile Spatial Buffer												
Racial/Ethnic Heterogeneity	0.493	0.378		0.307	0.363		1.441	0.554	**	1.387	0.329	***
Percent Black	-1.381	0.605	*	-0.648	0.617		-0.532	0.983		-0.168	0.572	
Percent Latino	-0.914	0.581		-0.351	0.566		0.779	0.827		0.318	0.504	
Percent Occupied	-4.790	2.179	*	-4.225	2.216		-7.527	2.716	**	-1.800	1.951	
Percent Ages 5 to 14	0.037	0.022		-0.031	0.022		-0.029	0.033		0.001	0.020	
Percent Ages 15 to 19	0.077	0.039		0.040	0.038		-0.016	0.056		0.015	0.036	
Land Use												
Industrial	3.822	1.349	**	1.789	1.339		0.160	2.188		2.650	1.246	*
Office	-0.832	1.052		-1.800	1.202		0.846	1.314		-1.284	0.957	
Residential	1.883	0.829	*	0.711	0.811		1.389	1.175		1.388	0.713	
Retail	2.072	1.141		1.817	1.117		-1.865	1.914		2.892	1.013	**
Disadvantage	0.012	0.014		0.017	0.014		0.018	0.021		-0.010	0.013	
Residential Stability	0.010	0.198		0.042	0.192		0.157	0.291		-0.021	0.177	
Population (logged)	-0.063	0.079		-0.069	0.074		-0.124	0.107		-0.066	0.066	
Property Crime Rate	-0.029	0.035		-0.015	0.035		-0.041	0.052		-0.023	0.030	
Violent Crime Rate	0.053	0.025	*	0.042	0.025		0.033	0.035		0.012	0.021	
Constant	0.594	2.734		1.889	2.739		2.988	3.676		-2.155	2.531	

NOTE: N= 473. * $p < .05$, ** $p < .01$, *** $p < .00$. School characteristics were multiply imputed (m=5). Year dummies are included in the models but not

Table 3.6 Continued

	Violent			All		
	b	SE		*b*	SE	
Suspensions$_{(t-1)}$						
Minor	0.001	0.001		0.002	0.001	
Property	0.002	0.006		-0.006	0.007	*
Sexual	0.042	0.029		0.061	0.033	
Substance	-0.001	0.002		-0.002	0.002	
Violent	0.000	0.003		0.002	0.001	
Average Suspension (Days)	-0.031	0.077		-0.081	0.082	
School Characteristics						
Percent Black	2.338	0.757	**	1.599	0.771	*
Percent Hispanic	1.146	0.746		0.941	0.759	
Percent White	0.119	0.897		0.582	0.917	
Academic Performance Index	-0.002	0.001	*	-0.003	0.001	***
Enrollment (logged)	-0.003	0.104	***	0.713	0.099	***
Percent Free or Reduced Lunch	0.000	0.004		0.001	0.004	
School Type[a]						
High	0.158	0.101		0.411	0.106	***
Nontraditional	-0.591	0.121	***	-0.586	0.124	***
Magnet	-0.272	0.125	*	-0.192	0.122	
Neighborhood Characteristics: 0.25-Mile Spatial Buffer						
Racial/Ethnic Heterogeneity	0.713	0.284	*	0.868	0.289	**
Percent Black	-1.205	0.462	**	-0.765	0.454	
Percent Latino	-1.230	0.446	**	-0.557	0.439	
Percent Occupied	-4.915	1.604	**	-3.970	1.715	*
Percent Ages 5 to 14	0.017	0.017		0.013	0.018	
Percent Ages 15 to 19	0.048	0.030		0.050	0.031	
Land Use						
Industrial	2.726	1.056	*	2.794	1.075	**
Office	-0.229	0.791		-1.357	0.778	
Residential	2.698	0.630	***	1.657	0.646	*
Retail	1.899	0.877	*	1.734	0.915	
Disadvantage	0.038	0.012	**	0.011	0.010	
Residential Stability	-0.041	0.152		-0.097	0.154	
Population (logged)	-0.170	0.060	**	-0.119	0.060	*
Property Crime Rate	-0.031	0.026		-0.025	0.026	
Violent Crime Rate	0.014	0.178		0.023	0.018	
Constant	2.088	2.002		1.921	2.081	

Table 3.7 Negative Binomial Regression Models Predicting School Crime, Combined Suspensions

	Minor			Property			Sexual			Substance		
	b	SE		*b*	SE		*b*	SE		*b*	SE	
Suspensions$_{(t-1)}$												
Total Suspensions	0.001	0.000	*	0.001	0.000	*	0.000	0.001		0.001	0.000	*
Average Suspension (Days)	0.049	0.103		-0.030	0.106		0.041	0.138		-0.244	0.093	**
School Characteristics												
Percent Black	3.104	1.041	**	1.252	1.003		1.585	1.468		-0.373	0.879	
Percent Hispanic	1.430	1.017		0.870	0.989		1.027	1.402		-0.091	0.858	
Percent White	-0.675	1.215		1.258	1.165		0.697	1.659		0.137	1.066	
Academic Performance Index	-0.002	0.001	**	-0.003	0.001	***	-0.002	0.002		-0.004	0.001	***
Enrollment (logged)	0.634	0.137	***	0.689	0.139	***	0.595	0.213	**	0.869	0.146	***
Percent Free or Reduced Lunch	-0.007	0.006		-0.002	0.005		-0.010	0.008		0.005	0.005	
School Type[a]												
High	0.089	0.122		0.553	0.127	***	-0.308	0.219		0.587	0.130	***
Nontraditional	-0.502	0.154	**	-0.538	0.148	***	-0.317	0.226		-0.644	0.140	***
Magnet	-0.253	0.169		0.041	0.157		-0.293	0.266		0.116	0.144	
Neighborhood Characteristics: 0.25-Mile Spatial Buffer												
Racial/Ethnic Heterogeneity	0.340	0.379		0.272	0.357		1.494	0.548	**	1.349	0.328	***
Percent Black	-1.419	0.607	*	-0.666	0.615		-0.612	0.981		-0.149	0.574	
Percent Latino	-0.973	0.586		-0.416	0.558		0.863	0.817		0.335	0.501	
Percent Occupied	-5.044	2.220	*	-4.446	2.208	*	-7.828	2.720	**	-1.938	1.953	
Percent Ages 5 to 14	0.043	0.023		-0.028	0.022		-0.025	0.032		-0.001	0.020	
Percent Ages 15 to 19	0.092	0.040	*	0.039	0.038		-0.015	0.056		0.015	0.035	
Land Use												
Industrial	3.446	1.353		1.833	1.328		0.447	2.170		2.639	1.251	*
Office	-0.905	1.060	*	-1.756	1.197		0.901	1.318		-1.183	0.958	
Residential	1.490	0.804		0.723	0.784		1.636	1.143		1.490	0.703	*
Retail	1.897	1.128		1.905	1.098		-1.578	1.868		2.890	1.015	**
Disadvantage	0.015	0.014		0.020	0.014		0.016	0.021		-0.009	0.013	
Residential Stability	-0.031	0.200		0.043	0.191		0.178	0.290		0.008	0.176	
Population (logged)	-0.062	0.080		-0.075	0.074		-0.121	0.106		-0.068	0.066	
Property Crime Rate	-0.023	0.035		-0.017	0.035		-0.040	0.052		-0.029	0.031	
Violent Crime Rate	0.047	0.025		0.041	0.025		0.038	0.035		0.016	0.022	
Constant	1.272	2.774		2.348	2.729		2.978	3.661		-1.841	2.529	

NOTE: N= 473. * $p < .05$, ** $p < .01$, *** $p < .00$. School characteristics were multiply imputed (m=5). Year dummies are included in the models but not

Table 3.7 Continued

	Violent			All		
	b	SE		*b*	SE	
Suspensions$_{(t-1)}$						
Total Suspensions	0.001	0.000		0.001	0.000	**
Average Suspension (Days)	-0.015	0.076		-0.054	0.082	
School Characteristics						
Percent Black	2.491	0.753	**	1.763	0.766	*
Percent Hispanic	1.185	0.740		0.877	0.754	
Percent White	0.137	0.894		0.488	0.918	
Academic Performance Index	-0.002	0.001	*	-0.003	0.001	***
Enrollment (logged)	0.579	0.103	***	0.695	0.097	***
Percent Free or Reduced Lunch	-0.001	0.004		0.001	0.004	
School Type[a]						
High	0.126	0.095		0.357	0.099	***
Nontraditional	-0.591	0.120	***	-0.578	0.123	***
Magnet	-0.284	0.124	*	-0.211	0.121	
Neighborhood Characteristics: 0.25-Mile Spatial Buffer						
Racial/Ethnic Heterogeneity	0.713	0.281	*	0.828	0.287	**
Percent Black	-1.232	0.461	**	-0.794	0.452	
Percent Latino	-1.212	0.442	**	-0.570	0.435	
Percent Occupied	-5.102	1.605	**	-4.147	1.719	*
Percent Ages 5 to 14	0.018	0.017		0.015	0.018	
Percent Ages 15 to 19	0.051	0.030		0.054	0.031	
Land Use						
Industrial	2.829	1.050	**	2.766	1.074	*
Office	-0.208	0.791		-1.297	0.782	
Residential	2.731	0.614	***	1.611	0.622	*
Retail	1.918	0.871	*	1.703	0.904	
Disadvantage	0.039	0.011	***	0.013	0.010	
Residential Stability	-0.031	0.151		-0.089	0.152	
Population (logged)	-0.169	0.060	**	-0.120	0.060	*
Property Crime Rate	-0.030	0.026		-0.025	0.027	
Violent Crime Rate	0.015	0.018		0.023	0.018	
Constant	2.207	2.006		2.212	2.091	

Table 3.8 Negative Binomial Regression Models Predicting School Crime, Suspensions by Student Race and Ethnicity

	Minor			Property			Sexual			Substance		
	b	SE		*b*	SE		*b*	SE		*b*	SE	
Suspensions$_{(t-1)}$												
Black Students	0.003	0.001	**	0.001	0.001		-0.003	0.002		0.002	0.001	*
Hispanic Students	0.000	0.001		0.001	0.001		0.001	0.001		0.000	0.001	
White Students	-0.002	0.006		0.000	0.005		0.002	0.008		0.007	0.005	
Average Suspension (Days)	0.008	0.105		-0.032	0.109		0.065	0.139		-0.240	0.095	*
School Characteristics												
Percent Black	2.551	1.057	*	1.224	1.026		2.251	1.486		-0.686	0.902	
Percent Hispanic	1.532	1.009		0.831	0.999		0.630	1.400		-0.007	0.854	
Percent White	-0.538	1.280		1.239	1.251		0.400	1.766		-0.467	1.129	
Academic Performance Index	-0.002	0.001	*	-0.003	0.001	***	-0.002	0.002		-0.004	0.001	***
Enrollment (logged)	0.678	0.138	***	0.694	0.140	***	0.561	0.215	**	0.882	0.146	***
Percent Free or Reduced Lunch	-0.008	0.006		-0.002	0.005		-0.010	0.008		0.004	0.005	
School Type[a]												
High	0.095	0.123		0.554	0.129	***	-0.357	0.224		0.564	0.131	***
Nontraditional	-0.491	0.153	**	-0.537	0.148	***	-0.328	0.226		-0.642	0.140	***
Magnet	-0.224	0.167		0.041	0.158		-0.337	0.265		0.152	0.144	
Neighborhood Characteristics: 0.25-Mile Spatial Buffer												
Racial/Ethnic Heterogeneity	0.276	0.380		0.265	0.360		1.541	0.546	**	1.381	0.330	***
Percent Black	-1.379	0.609	*	-0.679	0.617		-0.752	0.978		-0.088	0.576	
Percent Latino	-0.933	0.598		-0.440	0.567		0.762	0.816		0.463	0.505	
Percent Occupied	-5.167	2.214		-4.455	2.215	*	-8.032	2.719	**	-1.698	1.949	
Percent Ages 5 to 14	0.040	0.022		-0.027	0.022		-0.022	0.031		-0.004	0.020	
Percent Ages 15 to 19	0.085	0.040	*	0.040	0.038		-0.001	0.056		0.007	0.035	
Land Use												
Industrial	3.520	1.340	**	1.842	1.329		0.637	2.174		2.692	1.245	*
Office	-0.727	1.054		-1.744	1.199		0.802	1.309		-1.089	0.953	
Residential	1.598	0.797	*	0.735	0.786		1.703	1.139		1.617	0.701	*
Retail	1.772	1.130		1.916	1.102		-1.375	1.852		2.740	1.012	**
Disadvantage	0.014	0.014		0.020	0.014		0.018	0.021		-0.009	0.013	
Residential Stability	-0.011	0.197		0.043	0.191		0.143	0.288		0.017	0.174	
Population (logged)	-0.071	0.079		-0.075	0.074		-0.122	0.105		-0.072	0.066	
Property Crime Rate	-0.027	0.035		-0.017	0.035		-0.035	0.051		-0.033	0.031	
Violent Crime Rate	0.052	0.025	*	0.042	0.025		0.032	0.035		0.019	0.022	
Constant	1.233	2.754		2.388	2.741		3.868	3.663		-2.178	2.520	

NOTE: N= 473. * $p < .05$, ** $p < .01$, *** $p < .00$. School characteristics were multiply imputed (m=5). Year dummies are included in the models but not

Table 3.8 Continued

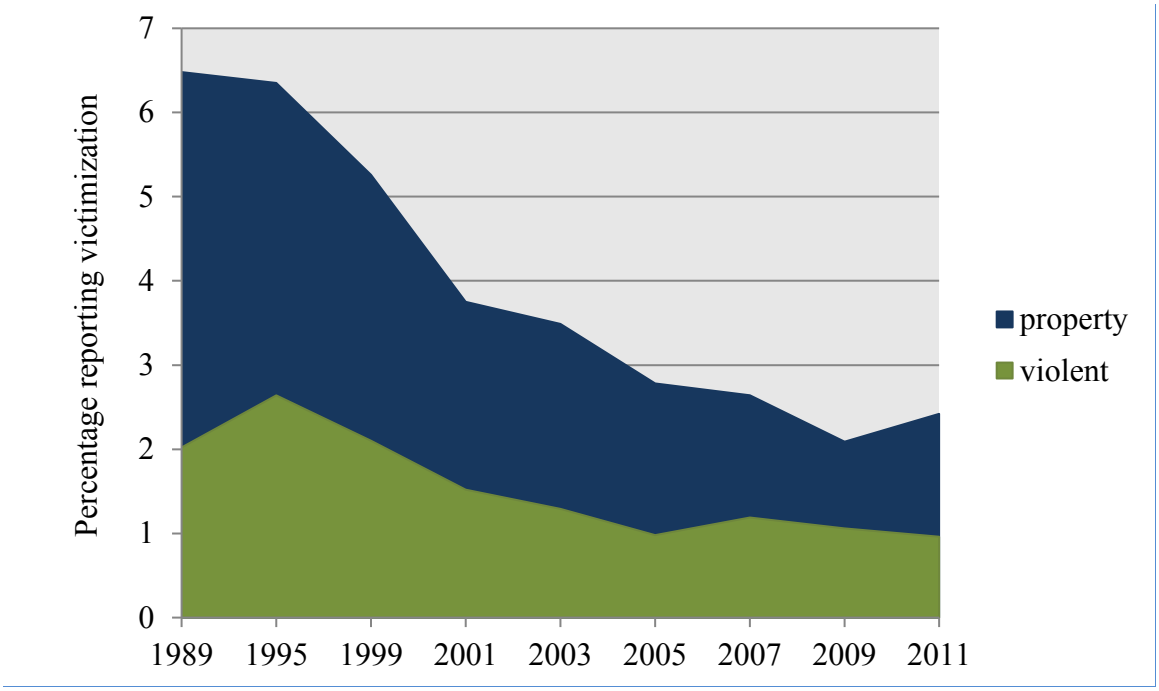
	Violent			All		
	b	SE		*b*	SE	
Suspensions$_{(t-1)}$						
Black Students	0.000	0.001		0.001	0.001	
Hispanic Students	0.001	0.000		0.001	0.001	
White Students	0.007	0.004		0.001	0.004	
Average Suspension (Days)	0.006	0.078		-0.057	0.085	
School Characteristics						
Percent Black	2.604	0.766	**	1.657	0.787	*
Percent Hispanic	1.149	0.742		0.883	0.759	
Percent White	-0.375	0.956		0.394	0.976	
Academic Performance Index	-0.002	0.001	*	-0.003	0.001	***
Enrollment (logged)	0.562	0.104	***	0.701	0.099	***
Percent Free or Reduced Lunch	-0.001	0.004		0.001	0.004	
School Type[a]						
High	0.106	0.096		0.355	0.100	***
Nontraditional	-0.598	0.120	***	-0.575	0.123	***
Magnet	-0.279	0.125	*	-0.204	0.122	
Neighborhood Characteristics: 0.25-Mile Spatial Buffer						
Racial/Ethnic Heterogeneity	0.734	0.280	**	0.822	0.289	**
Percent Black	-1.252	0.462	**	-0.787	0.454	
Percent Latino	-1.165	0.444	**	-0.563	0.444	
Percent Occupied	-4.884	1.604	**	-4.126	1.726	*
Percent Ages 5 to 14	0.018	0.017		0.014	0.018	
Percent Ages 15 to 19	0.048	0.030		0.053	0.031	
Land Use						
Industrial	2.891	1.046	**	2.797	1.076	**
Office	-0.198	0.787		-1.270	0.783	
Residential	2.777	0.612	***	1.653	0.626	**
Retail	1.903	0.868	*	1.675	0.910	
Disadvantage	0.039	0.011	***	0.013	0.010	
Residential Stability	-0.028	0.151		-0.089	0.153	
Population (logged)	-0.170	0.060	**	-0.122	0.061	*
Property Crime Rate	-0.031	0.026		-0.026	0.027	
Violent Crime Rate	0.016	0.018		0.024	0.018	
Constant	2.136	2.003		2.185	2.096	

Table 3.9 Negative Binomial Regression Model Predicting Number of Students Offenders

	Student Offenders		
	b	SE	
Suspensions$_{(t-1)}$			
Minor	0.002	0.001	**
Property	-0.009	0.007	
Sexual	0.055	0.038	
Substance	-0.003	0.002	
Violent	0.003	0.002	
Average Suspension (Days)	-0.059	0.096	
School Characteristics			
Percent Black	1.778	0.886	*
Percent Hispanic	0.971	0.875	
Percent White	0.306	1.051	
Academic Performance Index	-0.003	0.001	***
Enrollment (logged)	0.868	0.118	***
Percent Free or Reduced Lunch	0.002	0.005	
School Type[a]			
High	0.307	0.120	*
Nontraditional	-0.633	0.144	***
Magnet	-0.173	0.138	
Neighborhood Characteristics: 0.25-Mile Spatial Buffer			
Racial/Ethnic Heterogeneity	1.044	0.336	**
Percent Black	-0.834	0.516	
Percent Latino	-0.481	0.507	
Percent Occupied	-5.002	1.985	*
Percent Ages 5 to 14	0.022	0.020	
Percent Ages 15 to 19	0.060	0.036	
Land Use			
Industrial	3.788	1.241	**
Office	-2.225	0.910	*
Residential	1.319	0.749	
Retail	1.325	1.055	
Disadvantage	0.005	0.012	
Residential Stability	-0.089	0.175	
Population (logged)	-0.079	0.069	
Property Crime Rate	-0.008	0.030	
Violent Crime Rate	0.020	0.021	
Constant	1.679	2.400	

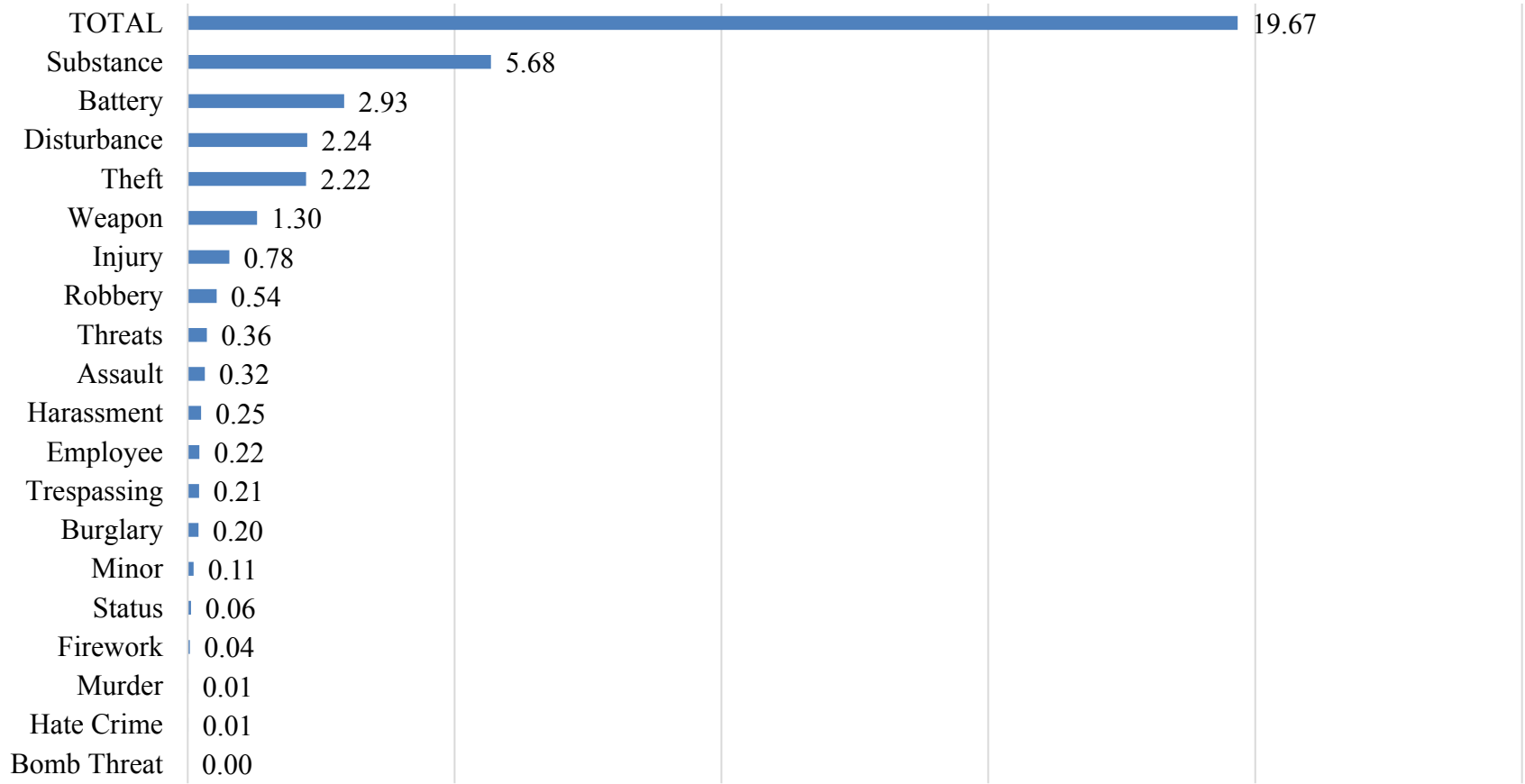
NOTE: N= 473. * $p < .05$, ** $p < .01$, *** $p < .00$. School characteristics were multiply imputed (m=5). Year dummies are included in the models but not displayed.
[a]The reference category for high schools and nontraditional schools is middle schools. Magnet schools are not a mutually exclusive category.

Figure 3.1 Student Victimizations, 1989-2011



DATA SOURCE: National Crime Victimization Survey, School Crime Supplement

Figure 3.2 Average Number of Crimes per School Block per Year



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Appendix A. LAUSD District Handbook: Student Conduct and Discipline Policies (Excerpts)

Subject	**Policy**
Attendance	Students labeled "truant" may be referred to the Student Attendance Review Board (SARB) and the City or District Attorney's Office. A student is considered truant if he/she has 3 or more unexcused absences or is tardy/absent for 30+ minutes during the school day. Truants shall be reported to the attendance supervisor or the superintendent of the school district.
Alcohol, Tobacco, Drugs and Violence Prevention and Prohibition	In cooperation with School Police and community agencies in disciplining students in violation, school administrators may use prevention education, direct intervention, expulsion, or arrest on a case-by-case basis to keep the school drug, alcohol, tobacco, and violence-free.
Alternative Schools	California state law authorizes all school districts to provide for alternative schools.
Bullying and Hazing	The LAUSD bullying and hazing policy, written in accordance with Federal, State and California Education Code, requires that all schools and all personnel promote mutual respect, tolerance, and acceptance among students and staff.
Gun-Free Safe Schools	The Federal Gun Free Safe Schools Act and California law prohibit the possession of firearms on school campuses. Pursuant to these laws, any student found in possession of a firearm will be subject to arrest and will be recommended for expulsion immediately. The term of expulsion shall be one year. Upon a finding that the student was in possession of a firearm, the governing board shall expel the student. ―Possession includes, but is not limited to, storage in lockers, purses, backpacks, automobiles.
Sexual Harassment	Upon witnessing an act of discrimination, harassment, intimidation and/or bullying based on actual or perceived characteristics of a protected category, school personnel are required to take immediate steps to intervene when it is safe to do so. Reporting such conduct to an administrator or Title IX/Bullying Complaint Manager can be an appropriate intervention.
Student Searches	If a student has engaged in conduct that causes an administrator to have reasonable suspicion that the student has committed, or is about to commit, a crime or has violated statutory laws or school rules, the administrator may conduct a search of that student. Jackets, purses, pockets, back packs, bags, and containers in the student‘s possession may be searched to the extent reasonably necessary. Under no conditions may a body or strip search be conducted.
Rehabilitation and Reinstatement from Expulsion	California law mandates school districts to provide educational placements and services to expelled students. It also requires school districts to develop rehabilitation plans and strategies for expelled students and authorizes services for students otherwise placed in District Community Day Schools. Education Code Section 48916 stipulates that, upon completion of the readmission process, the Board shall readmit the student, unless a finding is made that the student has not met the conditions of the rehabilitation plan or continues to pose a danger to the campus safety or to other pupils or employees of the school district.

Student/School Code of Conduct	Any student found to have committed any of the acts below will be subject to a full investigation and, if applicable, all appropriate disciplinary actions, which may include suspension, expulsion, and/or referral to law enforcement. These are not permitted: 1. Bullying/intimidation 2. Weapons possession 3. Fights/threats/violence 4. Drug possession/sale 5. Graffiti/vandalism 6. Gang activity 7. Cheating and plagiarism 8. Forgery and falsification 9. Sexual harassment and assault 10. Blackmail and extortion 11. Prejudice and hate crimes 12. Robbery and stealing 13. Fireworks and firecrackers
Suspensions and Expulsions (General)	A student may be suspended for no more than five consecutive school days. A student may be expelled without suspended enforcement (straight‖expelled) and, therefore, not be allowed to attend any LAUSD school or program during the term of expulsion. Or the enforcement of the expulsion may be suspended, in which case, the expelled student could be assigned to an LAUSD alternative educational program for the term of the expulsion. The length of an expulsion may be for the balance of the semester in which the Board expels; for the balance of the semester, plus the following school semester; or for one calendar year, depending on the violation and/or the student‘s social adjustment background. Under certain circumstances, the term of an expulsion may be lengthened. California. law allows classroom teachers to suspend students from the classroom for any of the behaviors described in Education Code Sections 25 48900. Only the school principal or his or her designee may suspend a student from school. If the student has committed an obscene act, engaged in habitual profanity or vulgarity, or has disrupted school activities or otherwise defied the valid authority of school officials, the teacher may require that the parent/guardian attend a portion of the school day in his or her child‘s classroom.
Grounds for Suspension/Expulsion	(a)(1) Caused, attempted to cause, or threatened to cause physical injury to another person. (a)(2) Willfully used force or violence upon the person of another, except in self-defense. (b) Possessed, sold, or otherwise furnished any firearm, knife, explosive, or other dangerous object unless, in the case of possession of any object of this type, the pupil had obtained written permission to possess the item from a certificated school employee, which is concurred in by the principal or the designee of the principal. (c) Unlawfully possessed, used, sold, or otherwise furnished, or been under the influence of any controlled substance listed in Chapter 2 (commencing with Section 11053) of Division 10 of the Health and Safety Code, an alcoholic beverage, or an intoxicant of any kind. (d) Unlawfully offered, arranged, or negotiated to sell any controlled substance listed in Chapter 2 (commencing with Section 11053) of Division 10 of the Health and Safety Code, an alcoholic beverage, or an intoxicant of any kind, and then either sold,

	delivered, or otherwise furnished to any person another liquid, substance, or material and represented the liquid, substance, or material as a controlled substance, alcoholic beverage, or intoxicant. (e) Committed or attempted to commit robbery or extortion. (f) Caused or attempted to cause damage to school property or private property. (g) Stolen or attempted to steal school property or private property. (h) Possessed or used tobacco, or any products containing tobacco or nicotine products, including, but not limited to, cigarettes, cigars, miniature cigars, clove cigarettes, smokeless tobacco, snuff, chew packets, and betel. However, this section does not prohibit use or possession by a pupil of his or her own prescription products. (i) Committed an obscene act or engaged in habitual profanity or vulgarity. (j) Unlawfully possessed or unlawfully offered, arranged, or negotiated to sell any drug paraphernalia, as defined in Section 11014.5 of the Health and Safety Code. (k) Disrupted school activities (school-wide activities; issued only by an administrator) (l) Knowingly received stolen school property or private property. (m) Possessed an imitation firearm. (n) Committed or attempted to commit a sexual assault or committed a sexual battery. (o) Harassed, threatened, or intimidated a pupil who is a complaining witness or a witness in a school disciplinary proceeding for the purpose of either preventing that pupil from being a witness or retaliating against that pupil for being a witness, or both. (p) Unlawfully offered, arranged to sell, negotiated to sell, or sold the prescription drug Soma. (q) Engaged in, or attempted to engage in, hazing as defined in Section 32050. (r) Engaged in an act of bullying, including, but not limited to, bullying committed by means of an electronic act directed specifically toward a pupil or school personnel. (s) Aided or abetted the infliction or attempted infliction of physical injury to another person (suspension only). 48900.2 Committed sexual harassment (Gr. 4-12). 48900.3 Caused, attempted to cause, threatened to cause, or participated in an act of hate violence (Gr. 4-12). 48900.4 Intentionally engaged in harassment, threats, or intimidation, directed against school district personnel or pupils (Gr. 4-12). 48900.7 Made terroristic threats against school officials or school property, or both.

CHAPTER FOUR
Conclusion

The shift to criminalize students by adopting a zero tolerance approach and increasing school security parallels the tough-on-crime movement in several ways, including the disproportionate use of punitive policies on minorities and disadvantaged youth and the numerous collateral consequences associated with these policies. This dissertation drew on several original datasets to explore how structural characteristics of the school and neighborhood influence (1) exclusion rates, (2) neighborhood crime, and (3) school crime. Previous studies that have examined how individual characteristics of students impact exclusionary discipline found that both race and disadvantage are significant predictors, though race has typically prevailed as the most pertinent factor. This study applied some of these same concepts to exclusionary discipline patterns at the school level and found evidence that supports the individual-level studies. Other studies examining neighborhood crime have found that schools tend to be criminogenic, increasing crime in the neighborhood. This project assessed the impact of exclusions, specifically, on neighborhood crime and revealed that exclusions are associated with increased crime in the surrounding area. Lastly, I take on the much debated school safety question by investigating whether exclusions impact school crime. The findings are mixed but show some safety benefits of suspensions for certain violations. However, I caution school actors against adopting the punitive model altogether, as less intrusive options have shown promising results without compromising the student's education.

These findings are discussed in greater detail below. I then offer policy suggestions based on the results of this dissertation and the current discussion around positive alternatives to

exclusionary discipline. Finally, I conclude this dissertation with closing remarks on the criminalization movement and the future of school discipline in the United States.

Summary of Findings

This project uses southern California as a research site and focuses on public middle, high, and nontraditional (e.g., alternative, continuation, opportunity, etc.) school exclusions, with a supplementary analysis concentrated exclusively on the Los Angeles Unified School District (LAUSD).

In Chapter One, I applied social reproduction and racial threat theories by assessing how racial and ethnic composition and disadvantage at both the neighborhood and school levels predict the use of exclusionary discipline. I examine public middle and high schools (hereafter referred to as "traditional" schools) separately from nontraditional public secondary schools. Similar to previous research, I find evidence that traditional schools with more disadvantaged and black students experience higher suspension and expulsion rates. Higher proportions of black students are also predictive of more discretionary violations, supporting the argument that racial discipline disproportionality is a result of administrator discretion. Furthermore, because I consider the joint effects of schools and neighborhoods, unlike previous studies, I also find that these results are even more pronounced when the racial composition of the school differs from that of the surrounding neighborhood, but only for nontraditional schools. More specifically, social control is heightened when there are more black and low-income students (in nontraditional schools) in areas with more white residents. No relationship was found between the racial/ethnic composition of nontraditional schools and exclusionary discipline when neighborhood characteristics were not simultaneously considered. Thus, it appears that the

stigmas attached to nontraditional schools in general protect minority and low-income students from punitive disparities within schools, though they are disproportionately punished compared to traditional school students. Interestingly, the proportion of Hispanic students did not increase exclusion rates in either school setting, possibly because of the unique majority of Latino/a students in southern California.

Next, Chapter Two applied a macro-level analysis to the school-to-prison pipeline argument. I drew on social disorganization and routine activity theories to examine how school exclusions impact neighborhood crime. I find that schools that rely on exclusionary discipline negatively impact the neighborhood, as greater numbers of suspensions in the area are associated with increased violent and property crimes. Such findings are consistent with the school-to-prison pipeline and provide some evidence on the potential mechanisms linking school exclusionary policies and later contact with the criminal justice system. However, contrary to expectations, expulsions were – with the exception of aggravated assault – significantly associated with reduced crime. It is possible that expelled students, with no connections to the local school, may leave the area to attend school elsewhere. Hence, a possible displacement effect may explain the unexpected results. These results were also parsed by level of neighborhood disadvantage, but there were no apparent differences between high and low disadvantage neighborhoods. Instead, exclusions impact crime in all areas.

The third and final study is presented in Chapter Three. I used longitudinal school discipline and crime data for LAUSD to investigate whether disciplinary exclusions improve school safety as intended. I questioned whether suspensions, which effectively remove students from settings of social development and formal social control and induce dropping out, actually *increase* crime – an unintentional but significant contribution to well-entrenched race and class

based disparities. The findings were somewhat mixed, where most of the categorical violation models produced null results (meaning there were no causal relationships between suspensions and school crime), but the aggregate suspension measure was positively and significantly associated with school crime in the next school year. Among the few significant results were suspensions for substance- and sex-related violations. After controlling for numerous school and neighborhood characteristics, this study found that schools with high numbers of substance-related suspensions experience fewer minor and violent crimes, but not substance crimes, in the following school year. Additionally, schools with high numbers of sex-related suspensions experience more sex-related crimes in the subsequent school year. It seems, then, that schools may benefit from individualized responses to antisocial behaviors rather than the one-size-fits-all method. If substance-related violations eventually develop into more serious offenses, but suspensions do not curb future substance-related violations, then the problematic conditions in school – not individual problem students – will persist. Under the current model, the response to rule violations is to continue forcing students out of school and off track, which has numerous consequences in and outside of school. Finally, despite the consistently disproportionate number of exclusions for minority students, this study failed to identify a school safety benefit of the excessive use of social control.

Policy Implications

School researchers have long been invested in understanding the causes of school disorder and conjuring best practices to engage students in a safe learning environment. In this section, I briefly discuss alternatives to the law and order system that have shown promising results. In general, a whole-school approach reaps the greatest benefits, but the major challenge

with this approach to school safety is that it takes considerable time and effort to produce long-term and positive changes. I also describe how these whole-school approaches can reduce discipline disparities and school crime. Finally, I reflect on disciplinary alternative schools and programs and argue that these should be used as a last resort – not as a readily available substitute – and that significant changes are needed within these schools, as well.

Exclusion Alternatives

Restorative Justice

One of the most popular alternatives to exclusionary discipline is restorative justice. This technique is based on a set of values that includes building and strengthening relationships, respecting others, and taking responsibility. For it to work, both school personnel and students have to "buy in" to the proposed methods and let go of the law and order approach. School personnel undergo training in restorative justice methods to develop new skills and better understand the students and their communities, cultures and norms. Contrary to zero tolerance (which emphasizes punishment), restorative justice promotes respect, accountability, repair of harm, and restoration of the community (Sumner, Silverman, & Frampton, 2010). While much of the focus is on disorder prevention, there are also non-punitive forms of discipline in restorative justice when students violate school rules. Misbehaving students may, for example, sit down with the affected party and teacher to discuss what happened and how harm can be repaired.

For restorative justice to work, sufficient time, energy, and resources must be available and consistent. The entire school – including teachers, administrators, staff, and students – has to make a conscious decision to practice the tenets of restorative practices and persevere even in the most onerous circumstances. Gregory and colleagues (2016) report on the challenges faced by

administrators of four Brooklyn secondary schools that recently implemented restorative justice to halt the school-to-prison pipeline and provide a racially just and sustainable disciplinary model. These administrators recommend four primary targets for those following the same path. In short, schools must (1) embrace a comprehensive vision that recognizes individuality and offers opportunities to forgive and repair problem behaviors, (2) recognize that this approach works best when given ample time and support from all school personnel, (3) start with community-building practices with adults first and cultivate student buy-in after, and (4) receive support and resources from larger systems, like the district and state. Although challenging to implement, restorative justice has been effective (e.g., improved relationships and fewer office referrals and suspensions) for schools and programs that implemented a school-based restorative justice program (Dalporto, 2013; Gonzalez, 2015; Song & Swearer, 2016).

School Climate

The school climate body of literature is extensive. School climate is a summary concept that includes various qualities of the school: the physical structure, the persons and groups and their relationships with one another, and the school culture (beliefs, values, and meaning) (Anderson, 1982). As an alternative to the law and order approach, school climate focuses on building relationships and creating a fair and positive environment for students so that they are more engaged in school and self-monitor their own behaviors. According to the sociological approach to school climate, the school is a cultural system of social relations among students, teachers, parents, and peers. Student behavior and achievement reflect the social processes, norms, and expectations of the school and its personnel (Purkey & Smith, 1983). Some critical aspects of school culture that create prosocial learning environments include consistency of

rewards and discipline, consensus about behavior and discipline, and clearly defined goals and behavioral expectations (Anderson, 1982). Schools that exhibit these characteristics have fewer problem behaviors among students and foster positive attitudes and academic achievement (Cook, Gottfredson, & Na, 2010; Thapa, Cohen, Guffey, & Higgins-D'Alessandro, 2010).

Authoritative school discipline is an approach that stems from authoritative parenting and school climate. It is based on the combination of structure and support in schools (Gregory & Cornell, 2009), where *structure* refers to the consistent and fair enforcement of school rules, and *support* refers to the care and attention provided by adults. Together, these school features help foster a positive school climate. Gregory and colleagues (2010) test the authoritative discipline theory by analyzing the effects of structure (students' experiences of fair and consistently enforced rules) and support (students' perceptions of staff as caring and helpful) on school safety, as measured by student-reported victimization, student perceptions of bullying at school, and teacher perceptions of bullying at school. They found that schools with more structure and support were associated with less student victimization and bullying, particularly when structure and support were taken together. Several other studies have also found that these characteristics effectively reduce victimization and school disorder (Astor, Guerra, & Van Acker, 2010; Gerlinger & Wo, 2016; Mayer & Leone, 1999; Wang, Selman, Dishion, & Stormshak, 2010; Welsh, 2001). Likewise, schools with unfair, unclear, and inconsistently enforced rules exhibit the worst discipline problems (Gottfredson, Gottfredson, Payne, & Gottfredson, 2005; Gottfredson & Gottfredson, 1985), and students are likely to reject the values of the school if they do not believe in the legitimacy of the disciplinary actions or feel teachers are not respectful of students (Stewart, 2003).

Reducing Discipline Disparities. One of the primary issues with punitive discipline is the unequal application of it by teachers and school administrators. Unfortunately, schools with more minority students tend to use more punitive than restorative practices (Payne & Welch, 2013). Some scholars have offered potential remedies for discipline disparities, which typically include culturally responsive, whole-school approaches, such as restorative justice and Positive Behavioral Interventions and Supports (PBIS).[79] Restorative justice has been shown to effectively reduce suspensions for minority students, thereby narrowing the discipline gap (Gonzalez, 2015; Sumner et al, 2010). PBIS is a data-driven approach that also aims to improve school climate and reduce discipline problems. "PBIS is premised upon the public health preventive intervention and mental health promotion framework in which universal, selective, and indicated preventive interventions are delivered through a multitiered system of supports" (Debnam, Bottiani, & Bradshaw, 2017, p. 106). The overall success of this program has been documented in a number of studies (see Bradshaw, Koth, Thornton, & Leaf, 2009), but it has been less successful in correcting the discipline gap (Kaufman et al., 2010) unless the program emphasizes cultural sensitivity. This could include (1) incorporating families and communities in decision-making processes, (2) collecting disaggregated student data, and (3) holding schools accountable for discipline equity (Debnam et al, 2017; McIntosh, Girvan, Horner, & Smolkowski, 2014; Vincent, Sprague, Pavel, Tobin, & Gau, 2015).

Developing classroom instruction that connects with minority students prevents disciplinary issues while improving academic engagement. In a secondary analysis of the *Monitoring the Future* data, Toldson, McGee, and Lemmons (2015) examined school

[79] PBIS is also referred to as Schoolwide Positive Behavioral Interventions and Supports (SWPBIS).

experiences of black, white, and Hispanic eighth- and tenth-grade males. Their study found that black and Hispanic males reported having lower grades and academic engagement than their white counterparts, yet they also had more positive attitudes about school than their white peers. Academic disengagement was the strongest predictor of disciplinary referrals for both white and black males, but aggressive behavior and school crime were much stronger predictors of referrals for white males compared to black males. Academic disengagement was also a strong predictor of truancy for black males but not white males, leading the authors to conclude that black males are more likely to withdraw from school in response to feeling academically disengaged – a cycle that ultimately feeds into the school-to-prison pipeline. As such, developing strategies to improve minority student experiences and connection to school are likely to improve academic engagement and reduce problem behaviors.

Reducing School Crime. All students and school personnel deserve to attend safe learning environments that are conducive to academic success. Fortunately, school crime has, for the most part, declined over the last 30 years. Furthermore, compared to serious violent crimes (i.e., rape, robbery, and aggravated assault) that occur outside of school in recent years, adolescents are about half as likely to be victimized in school (Cook et al., 2010). Variations in school crime rates can be explained in part by the organizational practices of the school. For instance, in a natural experiment in the Chicago Public Schools, in which a subset of ninth graders had won a lottery to attend a high-achieving school, Cullen, Jacobs and Levitt (2006) found that students who did not win the lottery were arrested at a rate 60 percent higher than those who transferred to the high-achieving school. In concert with this dissertation, the recommendation provided here for reducing school crime focuses on school rather than individual efforts.

Although the most recent response to dangerous or disruptive behaviors has been increased security and punitive disciplinary actions, there are other means to achieve the same goal without jeopardizing students' educations. Cook and colleagues (2010) provide an extensive review of school crime and the issues that surround it, but they conclude by stating that due to the limitations of the evidence base, their recommendations focus on research priorities rather than effective policy. However, the authors also note that creating a more cohesive, communal environment is a promising crime reduction strategy. Indeed, improving school climate by building relationships, treating students with respect, and providing clear, fair, and consistently enforced rules leads to less school disorder (Welsh, 2000). Additionally, involving a system of social services for students and families in need is key to reducing school disorder and improving achievement (Welsh, Jenkins, & Greene, 1997).

Disciplinary Alternative Schools and Programs

Disciplinary alternative schools and programs have become warehouses for at-risk students who for various reasons have failed to succeed in the general education classroom. Many of the students who enter these programs are disengaged from school and have struggled academically and/or behaviorally in conventional schooling. Arnove and Strout (1980) delineated the challenges of these schools nearly 40 years ago, yet these issues remain today:

> The limiting and negative factors of these alternatives are the following: the labeling and stigmatizing of youths in such programs; the disproportionate number of minority students enrolled in them with the attendant danger of racial isolation; the academic tracking which occurs when disruptive youths receive a minimal curriculum that prepares them for menial and dead-end jobs; the lack of choice and the blatant social control which characterize some alternatives; and the fact that often too little is done too late for the most neglected students. (p. 462)

Considering the multitude of issues found in alternative settings, these programs should not be

used as quick fixes for traditional schools that seek to transfer the accountability of low-achieving or at-risk students. While keeping youths in an educational program is preferred over exclusions without alternatives, these programs should be used as a last resort. Moreover, if students desire to return to traditional schooling, alternative programs should work with these students and their families to develop academic and behavioral records that allow them to transfer back. On average, alternative schools and programs offer fewer services and opportunities to learn than their mainstream counterparts (Kim, Losen, & Hewitt, 2010), making the transition back to traditional schooling or on to higher education nearly impossible. Administrators in traditional and nontraditional schools are strongly encouraged to work together so that at-risk students can succeed in settings that offer the most support for long-term success.

Directions for Future Research

The findings in this dissertation revealed several important research questions that were beyond the scope of this project. First, the study in Chapter One would benefit from teacher and administrator surveys or interviews that directly ask about perceptions of student behaviors and community involvement in decision-making. Additionally, the ways in which administrators process student misconduct, including their views on discipline in general, would contribute to our understanding of exclusionary discipline and disproportionality. Second, Chapter Two was limited by the grouped in- and out-of-school suspension data. By differentiating the two suspension types into separate measures, the argument that students not under adult supervision are more criminally active would be much stronger. Expelled students are removed from school supervision, at least temporarily, but we do not know if these students re-enrolled in another school or district, or if the student dropped out altogether. Moreover, with the exception of

aggravated assault, this study found a negative significant relationship between expulsion and crime, suggesting a possible displacement effect. The question of whether exclusions increase crime in the surrounding area would benefit from an individual-level assessment of student criminal trajectories. Future research may want to ask students when and where they committed offenses outside of school, particularly if the offenses occurred during their exclusion period and whether that was the student's first criminal offense. Third, a follow-up study to Chapter Three that investigates individual-level delinquency and crime at school would help answer the question of whether suspensions deter future criminality. At the school level, crime appears to increase with the number of suspensions, but we still do not know if the excluded students repeated violations, or if new students are contributing to the suspension counts each year. Finally, there is very limited research that examines the perspectives of excluded students or the difficulties faced by these students when they try to reenter the education system after exclusion and/or juvenile detention. A qualitative study on students placed in an alternative school revealed that these stigmatized youths were not hopeless and disengaged, as is commonly thought about them (Kim & Taylor, 2008). Instead, these alternative school students – who felt disconnected to and disrespected in their mainstream schools – had aspirations to finish high school and attend college. More research on students and discipline in alternative schools is greatly needed.

Concluding Thoughts

After decades of research showing the detrimental impact of exclusionary discipline on students, their families, and their communities, the criminalization movement is beginning to slow down – much like the "get tough" movement in the criminal justice system. Due to the disproportionate use of zero tolerance and the negative consequences that stem from them, these policies have

received backlash from politicians, civil rights activists, parents, and researchers alike. In California, for example, Governor Jerry Brown recently passed Assembly Bill 420 to amend the current law, which allowed for the suspension of a pupil for an enumerated list of offenses, including "willfully defying the valid authority of supervisors, teachers, administrators, school officials, or other school personnel" (California Education Code Section 48900). AB 420 eliminates the authority to suspend a student in grades 1 to 3 and eliminates the expulsion of any student for willful defiance. Assemblyman Roger Dickinson, a proponent of the bill, noted the disproportionate use of willful defiance to exclude black and Hispanic students as a major reason for this amendment. California Department of Education specialists are urging school principals to initiate a restorative justice model rather than rely on exclusionary discipline, especially after recent lawsuits on overly disproportionate uses of suspension and expulsion.[80]

Racial disparities in punitive discipline have gained national recognition. In July 2011, the Center for State Government's Justice Policy Center released a pivotal report on the short- and long-term effects of school discipline in Texas. Following this study, U.S. Attorney General Eric Holder and U.S. Secretary of Education Arne Duncan launched the Supportive School Discipline Initiative – a collaboration between the Department of Justice (DOJ) and the Department of Education (DOE). This initiative promises to bring key stakeholders together to generate effective, minimally invasive disciplinary practices, collect data, issue guidance to schools to help them comply with civil rights laws, and increase awareness among educators and other central figures about evidence-based policies and practices (DOE, 2011).

[80] School districts in California have been in hot water recently for disproportionately excluding black and Hispanic students. Kern County, for instance, recently faced a lawsuit for harsh punishments for minority students. Oakland Unified School District (OUSD) is facing the same claims for a second time in the last several years after the Department's Office for Civil Rights (OCR) determined that the racial disparities in disciplinary procedures were unjust.

A year later, in an Executive Order released in July 2012, President Barack Obama stated that African American students still face "substantial obstacles" when it comes to educational opportunity, including a disproportionate use of discipline and referrals to special education ("White House Initiative on Educational Excellence for African Americans", 2012). Among other objectives, the initiative declares an immediate effort towards "decreasing the disproportionate number of referrals of African American children from general education to special education by addressing the root causes of the referrals and eradicating discriminatory referrals" and towards reducing the dropout rate for African Americans, "in part by promoting a positive school climate that does not rely on methods that result in disparate use of disciplinary tools" ("White House Initiative on Educational Excellence for African Americans", 2012).

A federal order initiated the adoption of zero tolerance policies for weapons in every state in 1994. After years of research on disproportionate discipline procedures and the negative consequences associated with school exclusions, federal orders are now trying to curb the use of zero tolerance. As California kicks off statewide reform on exclusions for willful defiance, it is possible that other states will learn from the education "innovators", and orders from the executive office, and begin to reform their discipline policies, as well. The school board in Maryland, for example, recently approved changes to state discipline policies in order to end racial disparities in suspensions, keep students in school, and establish a rehabilitative model that reserves exclusions for only the most severe offenses (St. George, 2014). The evidence against zero tolerance is overwhelming, and policymakers can no longer ignore the short- and long-term success of non-punitive approaches.

Researchers have not yet analyzed the transition out of the punitive discipline model, as it is still in its early stages, but the future of school discipline is promising. As Attorney General

Eric Holder said in collaboration with Secretary of Education Arne Duncan, "Ensuring that our educational system is a doorway to opportunity – and not a point of entry to our criminal justice system – is a critical, and achievable, goal." The criminalization of schools and students has been a long and difficult road, but there is hope for serious progress as we continue to confront the systemic issues that plague our school systems. Recognizing that there are race and class differences in the ways our children experience education and social control was a necessary first step. Now is the time to build on this momentum to encourage schools and the juvenile justice system to work together instead of against each other. Many of the students who get caught in the school-to-prison pipeline are encumbered by hardships at home, inevitably making school attachment and achievement lower priorities. For these vulnerable students to succeed, we must do away with the punitive discipline model, recognize that youths are products of their environments (both home and school), and offer encouragement and assistance – not punishment – to those already struggling for equal footing.

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