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Suspending Progress: Collateral Consequences of Exclusionary Punishment in Public Schools

Brea L. Perry^a and Edward W. Morris^b

Abstract

An influential literature in criminology has identified indirect “collateral consequences” of mass imprisonment. We extend this criminological perspective to the context of the U.S. education system, conceptualizing exclusionary discipline practices (i.e., out-of-school suspension) as a manifestation of intensified social control in schools. Similar to patterns of family and community decline associated with mass incarceration, we theorize that exclusionary discipline policies have indirect adverse effects on non-suspended students in punitive schools. Using a large hierarchical and longitudinal dataset consisting of student and school records, we examine the effect of suspension on reading and math achievement. Our findings suggest that higher levels of exclusionary discipline within schools over time generate collateral damage, negatively affecting the academic achievement of non-suspended students in punitive contexts. This effect is strongest in schools with high levels of exclusionary discipline and schools with low levels of violence, although the adverse effect of exclusionary discipline is evident in even the most disorganized and hostile school environments. Our results level a strong argument against excessively punitive school policies and suggest the need for alternative means of establishing a disciplined environment through social integration.

Keywords

school discipline, suspension, social control, education, criminology

Over the past 30 years, sociologists have identified a profound shift in U.S. society toward an emphasis on crime, punishment, and social control. This “culture of control” has heightened the fear of crime, increased the desire for retribution, and expanded the scope of social exclusion (Garland 2001). Control-oriented approaches to crime are exemplified by policies like the War on Drugs campaign and three-strikes laws. Such policies have contributed to a four-fold increase in U.S. incarceration rates since the 1970s, resulting in the mass incarceration of millions

of people (Western 2006). Contrary to the proposed benefits of “getting tough on crime,” research in criminology documents devastating consequences for offenders, families, and

^aIndiana University

^bUniversity of Kentucky

Corresponding Author:

Brea Perry, Indiana University, Ballantine Hall
744, 1020 E. Kirkwood Ave., Bloomington, IN
47405

E-mail: blperry@indiana.edu

communities. These “collateral consequences” reveal the hidden costs of highly authoritarian approaches to social control (Mauer and Chesney-Lind 2002).

In this article, we extend this criminological perspective to the context of the U.S. education system, conceptualizing exclusionary discipline practices as a manifestation of the culture of control in schools. Disciplinary policies that remove rule-violating students from the learning environment have become a fixture of public education, with suspension rates doubling since the 1970s (Losen 2011). While school safety is the goal of these policies, a growing body of research challenges their morality and effectiveness, arguing that suspension and expulsion are overused and ineffective (Morris 2012; Noguera 2003; Skiba and Peterson 1999). In January 2014, the U.S. Department of Education issued a set of guiding principles on school discipline, cautioning schools to remove students from classrooms only as a last resort. Despite these concerns, we know surprisingly little about the effects of exclusionary discipline on academic achievement. Moreover, prior research focuses almost exclusively on students who are punished; it is unclear whether the high use of suspension creates a positive learning environment for rule-abiding students or instead inhibits their achievement.

We argue that excessive use of exclusionary punishment in public schools has collateral consequences for the academic success of all students. Using a large, longitudinal dataset drawn from a metropolitan school district in Kentucky, we examine the effects of school-level suspension on achievement. Our analysis reveals that students who attend schools with high rates of out-of-school suspension exhibit lower achievement, even if they are not personally suspended, reflecting a hidden cost of the emphasis on punishment and social control in education.

BACKGROUND

An emphasis on formal social control has come to dominate the culture and structure of

modern U.S. society (Garland 1990, 2001). For the first half of the twentieth century, the U.S. incarceration rate was fairly low and stable (Western 2006). However, after policy analysts concluded that rehabilitation programs for offenders were largely ineffective (Lipton, Martinson, and Wilks 1975), public policy toward crime and social control shifted. In the 1980s, this new stance sparked a range of “get tough” approaches to crime control. Policies such as mandatory minimum sentencing, three-strikes laws, and zero tolerance policing emerged from the assumption that more stringent criminal justice would reduce crime and enhance safety. This thinking marked a pivot toward punitive and exclusionary means of social control. Writing during the embryonic stages of this shift, Cohen (1985:234) predicted that “separation will take more and more rigid forms” and individuals deemed criminals would “be subject to more and more punitive forms of exclusion.” Indeed, tough-on-crime policies prompted a prison boom of such proportions that incarceration, probation, and parole have become norms, rather than aberrations, for many segments of the U.S. population, especially young men of color and those with few economic opportunities (Western 2006; Western, Pettit, and Guetzkow 2002). However, a growing body of research has uncovered the reverberating and often unseen repercussions of intensive social exclusion.

Collateral Consequences

Criminological research shows that mass imprisonment has substantial negative effects that extend beyond the arrest and the arrested individual. These ancillary effects are referred to as “collateral consequences” (Mauer and Chesney-Lind 2002). The work of Wildeman and colleagues (Wakefield and Wildeman 2013; Wildeman 2010; Wildeman, Schnittker, and Turney 2012) demonstrates that mass incarceration contributes to a host of problems among women and children related to imprisoned men. These indirect, negative effects are wide-ranging. Schwartz-Soicher,

Geller, and Garfinkel (2011) and Braman (2002) show that fathers' incarceration reduces family income and contributes to financial strains. Comfort (2008) documents the emotional stress and ambivalence experienced by female partners of imprisoned men. Other work identifies harmful effects for children of imprisoned parents across outcomes, including mental health, infant mortality, and academic achievement (Hagan and Foster 2012; Wakefield and Wildeman 2013).

Research in this area also traces consequences of mass imprisonment for community cohesion. Clear (2007) argues that high rates of incarceration create instability, which unsettles positive social connections within neighborhoods. Goffman's (2009) ethnographic work illustrates how the constant threat of imprisonment destabilizes already fragile communities. In her research, young men who were wanted by authorities fostered unpredictability in their families and neighborhoods by "ducking in and out" of people's lives (Goffman 2009:351). Taken as a whole, these studies expose the hidden costs of expanded incarceration, which produces adverse outcomes for the convicted and those connected to them.

Expanded Social Monitoring and Exclusion

While the research on collateral consequences is strong and compelling, it has not been extended beyond the risks associated with mass incarceration. Yet, from a culture of control perspective, mass incarceration is just one reflection of a deeper modern emphasis on surveillance, judgment, and punitive exclusion. Beckett and Herbert (2010), for example, argue that physical exclusion from social spaces is a popular method of community regulation in metropolitan areas. What they term "banishment" is used by cities to remove people deemed deviant (although not necessarily criminal), such as groups of youth or homeless, from public view. This exclusion proceeds under the rationale that it instills a sense of order and organization in public

space. Such practices greatly expand the reach of formal authority into the minute management of space and behavior. Similar to mass incarceration, a semblance of social order is achieved by removing those deemed troublesome or undesirable. Moreover, this action forces authorities to toughen their stance on behaviors that may previously have been seen as minimally offensive or irritating. Hence, banishment is justified by framing problems such as homelessness or mental illness as increasingly criminal and socially menacing.

Similar criminalized approaches to problems such as juvenile delinquency, poverty, homelessness, substance abuse, and mental illness have proliferated in recent decades. This reflects a tendency to frame problems arising in various social spheres as if they are all issues of law and order, increasing surveillance and the threat of punishment. Similar to Foucault's ([1977] 1995) notion of a "disciplinary society," intensive regulation, monitoring, and correction have spread from the prison and criminal justice system into a wide array of spaces. According to Simon (2007:4), "the technologies, discourses, and metaphors of crime and criminal justice have become more visible features of all kinds of institutions." Children, in particular, have encountered increasing adoption of such policies. Rios (2011:40), for example, argues that urban Black and Latino boys live within a "youth control complex" that constitutes "the combined effect of the web of institutions . . . that collectively punish, stigmatize, monitor, and criminalize young people in an attempt to control them." This web of control permeates not only traditional sites of criminal justice, but also institutions with purportedly different social functions and goals, such as education.

Exclusionary School Discipline

Current school discipline practices are far more invasive and punitive than in past decades, reflecting a growing crime control approach to student misbehavior (Hirschfield

2008; Kupchik 2010; Welch and Payne 2010). For example, uniformed police stationed in schools demonstrate the direct reach of the criminal justice system into educational contexts. Security cameras and random property searches on school grounds borrow criminal justice techniques of surveillance, and zero tolerance policies mimic rigid legal guidelines, requiring automatic suspension or expulsion for specified offenses (Noguera 2003). Additionally, students are more often remanded to police custody and charged with law violations for school offenses that were handled internally in the past (Hirschfield 2008). These policies increase the likelihood that misbehaving students will be removed from school through suspension, expulsion, alternative school, or juvenile detention (Morris 2012; Skiba 2000). Indeed, in 2010, more than 3 million children were suspended from school (Losen and Gillespie 2012), and suspension rates in U.S. public schools have doubled since the 1970s (Losen 2011). This represents an important change in educational thought and practice. Similar to banishment and incarceration in criminal justice, social control in schools is now primarily achieved by simply removing millions of students from the educational environment.

Most research conducted in the past decade focuses on documenting the extent of this new criminalization of discipline rather than tracing its effects on students. In addition, the exploration of consequences focuses on punished individuals but does not consider the generalized effects of a punitive environment. On an individual level, suspension exacerbates anger, apathy, and disengagement—psychosocial consequences that increase the likelihood of recidivism (Contenbader and Markson 1998; Davis and Jordan 1994; Jenkins 1997). School suspension is also correlated with poorer grades and performance on cognitive tests in science, math, and history (Davis and Jordan 1994). Arcia (2006) conducted a quasi-experiment in which groups of suspended and non-suspended students matched on similar social characteristics were followed over time. After two years, the

suspended group was nearly five grade levels behind the non-suspended group, suggesting a substantial effect of suspension on academic growth.

Although being suspended likely has negative consequences for students' life chances, exclusionary discipline policies are considered necessary for school safety. One of the key rationales for excluding offending students from the educational environment is to ensure that others can learn without disruption (Noguera 2003), especially in environments where students are deemed behaviorally at-risk or "out of control" (Skiba and Peterson 1999). This line of reasoning suggests that suspension instills order, providing an environment conducive to learning for all students. These same arguments regarding benefits of a disciplinary society—tantamount to sacrificing a few for the good of all—are also used to justify mass incarceration. Yet, in parallel to research on mass imprisonment, exclusionary discipline in schools could unintentionally trigger broad adverse consequences.

Broader Impacts of Punishment

In theorizing risks for non-punished students, we center attention on the broader social environment that punishment produces, rather than punishment as an individual act. In *Punishment and Modern Society*, Garland (1990) draws from Durkheim to make the case that punishment serves broad symbolic, cultural, and affective functions that extend well beyond the specific act of discipline.¹ Punishment *communicates meanings* surrounding values, norms, and group and place identity. While punishment is useful in communicating these beliefs, Durkheim cautioned that punishment enacted too zealously could undermine social cohesion. In *Moral Education*, Durkheim ([1925] 1973) argues that school discipline is critical for imparting norms and values in children. However, the moral imperative of school discipline cannot be achieved by punishment per se, but rather by how punishment affirms the legitimacy of just rules. Similarly, Arum (2003) finds that

school discipline is most effective when it is moderately strict, consistent, and perceived as fair by students. Overly punitive environments erode a school's moral authority, producing alienation and resistance. In such situations, punishment becomes an end in itself, not an occasional means to an end of normative social order. Such contexts can promote "legal cynicism," a perceptual frame in which community or group members view law enforcement as illegitimate (Kirk and Papachristos 2011). This cynical distrust of formal authority can occur even among group members who hew to rules themselves (Kirk and Matsuda 2011).²

Ethnographic work in education verifies that a punitive school environment can subvert genuine institutional authority and create student apathy and disconnection (Morris 2005). In such environments, students operate under the same disciplinary regime and are confronted with common symbols and technologies of control. This affects well-behaved and poorly behaved students alike. Ferguson (2000), for example, analyzes two groups of Black boys in her ethnography of school punishment: the "Troublemakers" who took on deviant identities, and the "Schoolboys" who adhered to school rules. Ferguson shows that the Schoolboys, despite their assiduously good behavior, operated under a constant threat of assessment and redefinition into the Troublemaker category. Nolan (2011) and Kupchik (2010) vividly describe the overarching sense of anxiety for all students in punitive educational contexts. What Nolan (2011:68) calls the "ubiquity of the threat" of punishment dominates the school climate and radiates throughout the school community. In such contexts, the goal of social control can overshadow the goal of education. Furthermore, when suspension is used as a predominate form of punishment, the pervasive movement of suspended students in and out of classrooms can create a volatile and socially disorganized environment, similar to the effects of mass incarceration (Clear 2007).

Drawing from this work in education and criminology, we assert that school discipline

conveys important symbolic meanings that students attach to the institution, and it influences important social relationships. When highly punitive, an educational environment can breed anxiety, distrust, and uncertainty, even for students who do nothing wrong. This broader theorization of punishment and implications for the non-punished has not been employed in previous research on suspension; nor has it been addressed in rationales for control-oriented practices of school discipline.

Effects of a Punitive Environment on Non-suspended Students

Although one of the key rationales for high levels of suspension is that it benefits non-suspended students, this proposition has not been empirically verified. In one of the few assessments, Rausch and Skiba (2004) find that schools with higher suspension rates have lower levels of proficiency on statewide standardized tests. However, because their school-level analysis includes all students, it is possible that the experiences of suspended students are driving their results. Moreover, the confounding influence of unobserved heterogeneity between schools cannot be ruled out using cross-sectional data, leaving open the possibility that school-level differences influence both suspension rates and achievement. To our knowledge, no studies have examined how non-suspended students fare in high-suspension environments, nor have existing studies employed a fixed-effects strategy to reduce threats to causality.

We predict that non-suspended students in schools with elevated levels of exclusionary discipline will suffer academic declines through the collateral consequences of a punitive environment. Moreover, we hypothesize that increasing use of exclusionary discipline in schools will have adverse effects on non-suspended student achievement *above and beyond the overall level of student offending and discipline*. This finding would suggest that excessive use of exclusionary discipline creates a culture of control that impedes the success of all students.

Using multilevel methods that capitalize on the explanatory power of longitudinal and hierarchical data, we focus on the following questions:

1. Do changes in the frequency of out-of-school suspension over time affect the academic achievement of students who are not suspended?
2. Is the relationship between out-of-school suspension and academic achievement explained by other changes in schools' characteristics?
3. Is the relationship between out-of-school suspension and academic achievement explained by changes in schools' levels of violence and disorganization?

METHODS

Data for this analysis were compiled as part of the Kentucky School Discipline Study (KSDS). The database consists of existing, de-identified school records and supplementary data collected routinely from parents in a large, urban public school district in Kentucky. Our sample includes students in grades 6 through 10 (middle and high school) who were enrolled in a district public school over a three-year period beginning in August 2008 and ending in June 2011. The full sample includes 24,347 students. However, we dropped 7,450 students (31 percent of the full sample) due to inconsistent use of Measure of Academic Progress (MAP) testing by the school district prior to 2009. By 2009 to 2010, full implementation of the testing was in place. Because the piloting process was random, missing data are unlikely to lead to biases. We dropped an additional 10 cases due to missing data on other variables.

The full sample without missing data includes 16,897 students nested in 17 schools, providing a total of 38,062 observations over six semesters (or three years). Approximately 49 percent of students in the school district are girls and 51 percent are boys (see Table 1). The majority of these students are White (61 percent) or Black (24 percent); 9 percent are Latino, 4 percent are Asian, and 3 percent classify themselves as some other race.

Among all students, 44 percent qualify for free or reduced-price meals. These data, drawn from one school system, are not nationally representative of all public school children. Most notably, a smaller percentage of the U.S. student population is non-Hispanic Black (17 percent) compared to our sample, and a greater percentage is Latino (21 percent; National Center for Education Statistics 2014). However, Black populations tend to be concentrated in the southeast where this school district is located. Consequently, these data may be reasonably representative of the southeastern United States.

With respect to patterns of exclusionary discipline (see Table 1), our sample mirrors national trends (Aud, Fox, and KewalRamani 2010). Specifically, rates of out-of-school suspension in our Kentucky data and in a nationally representative sample (National Household Education Surveys; U.S. Department of Education 2007) are the same (22 percent of students had ever been suspended). Racial and ethnic disparities in suspension are also similar. About 42 percent of Black students in our sample had ever been suspended, compared to 43 percent in the nationally representative sample (a non-significant difference). Among Latinos, 26 percent in the Kentucky school district had ever been suspended compared to 22 percent nationally ($p < .001$). In both datasets, Asians are less likely to have been suspended, although this difference is larger in the Kentucky school district (4 and 11 percent, respectively; $p < .001$). Finally, 18 percent of girls and 26 percent of boys in the Kentucky sample had been suspended, compared to 15 percent of girls and 28 percent of boys nationally, suggesting that boys in the general population are slightly more at risk for suspension than are boys in the Kentucky school district. Overall, these patterns are remarkably similar in magnitude and always in the same direction. These findings suggest that exclusionary discipline patterns in the data used for this analysis are representative of national trends.

Our purpose here is to determine the relationship between the disciplinary context in schools and students' academic achievement. Although we use the full sample to compute

Table 1. Socio-demographic and Suspension Characteristics of the KSDS School District and National Sample

	KSDS %	National %	Difference
Gender			
Girls	49.1	51.0	***
Race/Ethnicity			
White	60.7	55.8	***
Black	24.3	17.0	***
Latino	8.5	21.2	***
Asian	3.9	4.8	***
Other/biracial	2.4	1.2	***
Socioeconomic Status			
Free/reduced-price lunch	43.8	48.0	***
Out-of-School Suspension			
Ever suspended	22.0	21.6	NS
<i>By race</i>			
White	14.5	15.6	***
Black	42.0	42.8	NS
Latino	26.0	21.9	***
Asian	4.6	10.8	***
Other/biracial	25.5	25.5	NS
<i>By gender</i>			
Girls	17.8	14.9	***
Boys	26.1	27.9	***

Note: Statistics from the Kentucky School Discipline Study (KSDS), National Center for Education Statistics (2014), and National Household Education Survey (U.S. Department of Education 2007). *** $p < .001$ (two-tailed tests); NS = not significant.

school-level variables, we removed all students with one or more out-of-school suspensions from the analysis sample. This strategy provides an estimate of school-level effects on individual achievement that is unbiased by personal suspension experiences. We dropped 749 students with out-of-school suspensions from the analysis sample, leaving 16,148 students and 34,721 observations. Students with suspensions were disproportionately male, Black, Hispanic, and eligible for free/reduced lunch, consistent with national trends. In the analysis sample, 50 percent are girls and 43 percent are on free/reduced lunch. Additionally, 61 percent are White, 23 percent Black, 9 percent Latino, 4 percent Asian, and 3 percent some other race or ethnicity.

Measures

The dependent variables of interest are academic achievement in reading and math.

Between 2008 and 2011 in the school district covered by our dataset, academic achievement was measured using MAP testing across the state. MAP is a computerized adaptive test designed to help schools monitor academic growth in reading and math and make informed decisions about placement and needed services. Scores are numeric and normally distributed. The tests are not timed and are administered three times per year: the beginning of the academic year, the end of the first semester, and the end of the academic year. To reduce concerns about reverse causation (i.e., low academic performance leading to high suspension rates), we use a naturally lagged independent variable. That is, we use suspensions in a given semester to predict scores from tests administered at the end of the semester, ensuring that suspensions occurred prior to or (in rare cases) during the testing date. The analysis uses test scores obtained at the beginning of the

year—following the summer break and prior to suspensions occurring—only in a series of placebo regressions for assessing causal inference. In addition, we calculate each student's percentile score relative to other students in the school district in the same grade. This method of standardizing test scores is easily interpretable and accounts for natural increases in performance over time associated with grade advancement.

We use math and reading test scores as outcomes for several reasons. First, these subjects are foundational to overall educational success: mastery of other subjects depends on math and reading fluency. Test scores, rather than grades, provide more uniform comparative measures of student knowledge and competency because of standardization (Andreasen, Rasmussen, and Ydesen 2013). These assessments also predict other dimensions of educational progress. For example, early achievement test scores are associated with key outcomes such as grade retention, dropping out, and postsecondary success (Hernandez 2011). Second, some research suggests that reading achievement is more influenced by home environment, whereas math achievement is more influenced by school environment (Lee and Bryk 1989). By using both measures, we protect against over-emphasizing home or school influences on achievement. Finally, in the school district we study, results of MAP reading and math tests are used for differentiating instruction. Higher scoring students gain more opportunities to advance through academic trajectories (i.e., tracks or course sequences), which will eventually shape postsecondary outcomes, while lower scoring students may be remediated or retained (Gamoran 1987).

The key independent variable of interest is school-level exclusionary discipline, measured using out-of-school suspension. This variable is equal to the number of students suspended in each school in each semester; it is coded in tens to facilitate interpretation. We also include number of suspended students squared (i.e., a polynomial term) to model

nonlinearity in the relationship between school-level suspensions and achievement. In addition, we performed sensitivity analyses using different methods of coding this variable, including using the suspension rate (i.e., proportion of students with suspensions). These models yield findings identical to those presented here with respect to patterns of significance, but with effects of slightly smaller magnitude. This may indicate that each additional suspension event has an adverse effect on achievement, regardless of a school's size.

We estimated growth curve models with time coded using academic semester, beginning with 1 at baseline in fall 2008 and ending with 6 in spring 2011. We also calculated time-squared and time-cubed to assess the nonlinearity of the growth or decline in academic achievement over time. Because we employ a fixed-effects modeling approach, all time-invariant characteristics of students, including gender and race/ethnicity, are controlled (Allison 2009). Time-varying controls at the student level include socioeconomic status and receipt of special education services. We measure socioeconomic status using participation in the free or reduced meal program (1 = yes; 0 = no). We measure receipt of special education services using a dichotomous indicator. In addition, each student's own behavior is controlled using a measure of the total number of disciplinary infractions each student receives in a given year.

School-level control variables include percent racial or ethnic minority, percent qualifying for free or reduced lunch, and percent receiving special education services. All of these variables are positively correlated with out-of-school suspensions. Other potential confounding characteristics of schools for which we control are spending (expenditures per student in \$1,000) and school size (in hundreds).

Our models include a series of variables measuring overall levels of discipline and disorganization to isolate the effects of exclusionary discipline in particular. These variables are number of in-school suspensions,

Saturday detentions, and after-school detentions. We combined (summed) Saturday and after-school detentions, because schools used Saturday detentions infrequently during the study period. To adjust for the level of violence and disorganization in schools, which might confound the association between suspension and achievement, we control for three additional variables: the annual number of drug-related infractions (e.g., possession, use, and distribution), violent infractions (e.g., fighting, physical harassment, and assault), and disruptive behavioral incidents (e.g., classroom misbehavior, oppositional behavior, yelling, and roughhousing) in each school.

Analyses

Analyses focus on identifying the effects of school-level out-of-school suspension on academic achievement. We model multivariate effects with multilevel fixed-effects linear regression models using Stata 13 (Statacorp 2013). These adjust for the hierarchical data structure and the interdependence among observations resulting from having multiple observations over time for each student and multiple students in schools. The models have a three-level structure where level-1 observations (time points) are nested in level-2 individual students, which are nested in level-3 schools.

Because these models are designed to test causal processes and the effects of contextual variables on individual students, we employ a conservative fixed-effects strategy at the student and school levels. In these models, all time-invariant heterogeneity at the student and school levels is controlled. The level-2 fixed effect is incorporated using Stata's `-fe-` option, and a level-3 fixed effect is achieved by including dichotomous school indicators. Mechanisms of suspension and achievement for students in a particular semester and school are evaluated relative to their own levels in other waves of the study in the same school. This means every student essentially serves as their own control, permitting less

biased estimation of dynamic school-level effects. Student-level factors like gender, race and ethnicity, family structure,³ and other measures that are unlikely to change substantially over a three-year period are controlled. Likewise, school-level variables (e.g., the neighborhood in which a school is located) that are time invariant or that can reasonably be expected to change very little over a three-year period are controlled because all comparisons are between students within the same school.⁴ The coefficient for out-of-school school-level suspension captures changes in the disciplinary context within a school over time that may affect increases or decreases in student academic achievement; the fixed effects capture all time-invariant between-student and between-school heterogeneity.

In a series of stepwise models, we estimate a quadratic growth curve model to incorporate longitudinal variation in reading and math achievement scores in this school system. The baseline growth curve model includes only the outcome of interest—out-of-school suspension and its quadratic term. The second model adds student-level time-variant controls, including free/reduced lunch status, receipt of special education services, and disciplinary infractions. The third model includes demographic school-level controls (i.e., spending, size, and racial/ethnic, socioeconomic, and special education composition). A fourth model adds other types of discipline. A fifth model incorporates measures of the overall level of violence and disorganization in schools, including an interaction between violence and suspension at the school level.

To demonstrate the magnitude of the influence of school-level suspension on academic achievement, we used the `-margins-` command in Stata to generate a graph of predicted values of reading and math achievement. The figures displaying the effects of school-level suspension on achievement include the interaction by level of violence in the school. Reading and math scores are expressed in percentiles; we added lines indicating the mean and standard deviation of school

suspension to facilitate interpretation of the magnitude of effects.

Although fixed-effects estimates are robust to biases stemming from unobserved stable characteristics of students and schools, omitted time-varying characteristics and reverse causation may still threaten causal inference. To test the spuriousness of the relationship between school-level suspension and students' academic achievement, we performed a set of placebo regressions. This method tests for associations that should not exist if the relationship between two variables is causal in a particular direction (Sharkey et al. 2012; Wildeman 2010). In this analysis, we predict beginning-of-year MAP test scores (measured in August and September) using school suspensions occurring during the following spring semester, ensuring no overlap between test measurement and the occurrence of suspensions. In other words, the dependent variable is measured prior to the independent variable of interest, and we expect to find no association. If we identify a significant relationship, it indicates that a third omitted variable may be driving the association between suspension and achievement, or that the association is due to reverse causation.

The analysis sample for the placebo regressions is reduced by about 9 percent ($n = 1,410$) due to missing data on the beginning-of-year MAP test. To assess whether differences in placebo and standard regression results are due to sample differences, we replicated the original set of analyses using this restricted sample. Results using the two samples are substantively identical, suggesting the placebo findings are not simply a function of sample differences or reduced sample size. We fit both a linear and a nonlinear functional form for suspensions, and we ran models without controls and with the full set of covariates.

A number of school-level variables are correlated and introduce multicollinearity. A large sample like this one is generally more robust to moderate levels of multicollinearity than are smaller samples. However, the estimates and significance of several school-level variables (i.e., percent minority, percent free/

reduced lunch, expenditures, and school size) should be interpreted with caution, if at all. Their purpose in these models is to rule out potential confounding effects, not to estimate their true influence. Despite multicollinearity, the out-of-school suspension variable is remarkably robust to the addition and removal of various combinations of covariates. In other words, the stability of the coefficient and p -value for school-level suspension is unaffected by collinearity between control variables and can safely be ignored. We settled on this combination of control variables because they pose the greatest potential threat to our causal argument regarding school disciplinary context and achievement.

RESULTS

Table 2 presents descriptive statistics. The interclass correlations for MAP reading and math percentiles are .84 and .89, respectively, in an empty model, suggesting substantial correlation in academic achievement across time within each student. At the school level, each school has an average of 93.97 out-of-school suspensions per semester, with considerable variability across schools and semesters ($s = 61.22$).

Table 3 displays the effects of suspension on academic achievement in reading. As seen in Model 1, the relationship between school-level out-of-school suspension over time and student academic achievement is statistically significant and curvilinear. Increasing school-level suspension is associated with very modest growth in reading achievement, to about the mean level of exclusionary discipline, at which point achievement begins to decline rapidly with increasing suspension ($p < .001$). This estimate is unaffected by the addition of free/reduced lunch status, special education services, and number of disciplinary infractions, as seen in Model 2. In Model 3, we add school characteristics, but these do not affect the relationship between school-level suspension and reading achievement. This model also includes controls for student expenditures and school size, neither of which confound the adverse effect of out-of-school suspension.

Table 2. Descriptive Statistics on Dependent and Independent Variables, $n = 16,148$

	Prop.	Mean	SD	Range
Student-level academic achievement				
MAP reading percentile (grade-normed)		49.82	28.77	.01–99.99
MAP math percentile (grade-normed)		49.89	28.82	.01–99.99
School-level exclusionary discipline				
Out-of-school suspension		93.97	61.22	21.00–284.00
Student-level controls				
Free/reduced lunch	.44			
Special education services	.08			
Disciplinary infractions		.18	.68	.00–15.00
School-level controls				
Percent racial/ethnic minority		39.18	12.64	17.38–76.62
Percent free/reduced lunch		44.01	15.83	25.76–85.07
Percent special education		8.12	3.17	4.53–31.20
Expenditures/student (\$100)		62.95	10.29	49.73–187.65
School size (hundreds)		13.34	6.65	1.92–23.10
In-school suspensions		14.79	20.52	.00–190.00
Detentions		35.31	49.64	.00–223.00
Drug-related infractions		8.97	10.77	.00–43.00
Violent infractions		37.80	16.76	10.00–86.00
Disruptive behavior infractions		76.99	55.51	10.00–267.00

Models 4 and 5 in Table 3 include additional disciplinary and contextual variables related to the level of disorganization and violence in schools (i.e., the number of drug, violent, and disruptive infractions). We include these controls to examine the possibility that a disruptive and unsafe learning environment confounds the associations between high levels of suspension and lower achievement. When other measures of disciplinary context are included in Model 4, the magnitude of the effect of out-of-school suspension decreases slightly but remains significant ($p < .001$). In Model 5, after adding levels of disorganization and violence, the relationship between school-level suspension and reading achievement becomes quite strong. Sensitivity analyses reveal that level of violence has a suppressor effect on out-of-school suspension due to an interaction between these two variables.

The curvilinear relationship between school suspension and reading achievement at different levels of school violence is

depicted in a graph of predicted values (see Figure 1). In all schools, we find almost no effect of school suspension below mean levels of this variable. In other words, low levels of school suspension do not affect non-suspended students' reading achievement. However, above the mean, we see an adverse effect of school suspension that becomes especially pronounced at greater-than-one standard deviation above the mean (i.e., the top one-third of schools). Moreover, the degree of harm associated with increasing exclusionary discipline depends on the level of violence in schools. In schools with low levels of violence (one standard deviation below the mean), the negative effect of out-of-school suspension is very strong at high levels of suspension. Under these conditions, the predicted percentile score in reading achievement decreases from about 54th at the mean level of suspension to 28th at very high levels of suspension (two standard deviations above the mean). In very violent environments (one standard deviation above the

Table 3. Mixed-Effects Linear Regression of Academic Achievement in Reading (Grade-Normed Percentile Score) among Non-suspended Students on Out-of-School Suspension over Time

	Model 1	Model 2	Model 3	Model 4	Model 5
Time (semesters)	-1.370*	-1.417*	.836	.838	-.588
	(.56)	(.56)	(.16)	(1.01)	(1.08)
Time-squared	.318***	.323***	.155	.169	.259**
	(.06)	(.06)	(.09)	(.09)	(.10)
Out-of-school suspension (tens)	.744***	.747***	.623***	.448***	2.757***
	(.07)	(.12)	(.13)	(.14)	(.35)
Suspension-squared	-.028***	-.028***	-.027***	-.021***	-.177***
	(.01)	(.01)	(.01)	(.01)	(.02)
Student-Level Controls					
Free/reduced lunch		1.255	1.332	1.334	1.307
		(.72)	(.72)	(.72)	(.72)
Special education services		1.173	.901	.844	.893
		(2.28)	(2.28)	(2.28)	(2.27)
Disciplinary infractions		-.823*	-.914*	-.988*	-.987*
		(.42)	(.42)	(.42)	(.42)
School-Level Controls					
Percent racial/ethnic minority			.552*	.501*	.105
			(.22)	(.22)	(.28)
Percent free/reduced lunch			-.785***	-.685***	-.249
			(.19)	(.20)	(.23)
Percent special education			-.184	-.309	-.765**
			(.27)	(.28)	(.29)
Expenditures/student (\$100)			.101	-.027	.451*
			(.13)	(.14)	(.21)
School size (hundreds)			-2.497**	-3.422***	-3.564***
			(.85)	(.89)	(.91)
In-school suspensions (tens)				.003	-.175
				(.08)	(.09)
Detentions (tens)				.153***	.343***
				(.05)	(.06)
Drug-related infractions (tens)					-.778***
					(.23)
Violent infractions (tens)					1.312***
					(.41)
Disruptive infractions (tens)					.184*
					(.08)
Interaction Term					
Out-of-school suspension x violence					-.348***
					(.05)
Suspension-squared x violence					.021***
					(.01)
F	35.35***	31.06***	27.99***	26.50***	26.19***
ρ	.84	.84	.84	.84	.84

Note: $n = 16,148$. Unstandardized coefficients, standard errors in parentheses; models control for dichotomous school indicators.

* $p < .05$; ** $p < .01$; *** $p < .001$ (two-tailed tests).

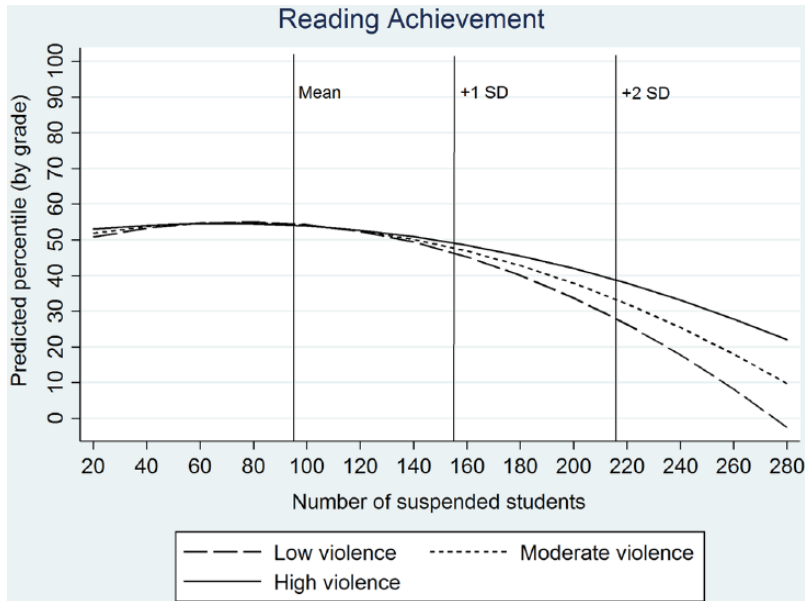


Figure 1. Predicted Values of MAP Reading Scores (Percentile) for Non-suspended Students over Time as a Function of School-Level Violence and Out-of-School Suspensions
Note: Based on Model 5 in Table 2; low violence = 1SD below mean; moderate violence = mean; high violence = 1SD above mean.

mean), the predicted change under the same conditions is estimated to be about the 54th percentile at the mean to the 39th percentile at very high levels of suspension. In short, high levels of suspension have a negative effect on reading achievement in all schools, but this effect is less pronounced in disorganized and violent school environments.

Table 4 presents results from the regression of academic achievement in math on school-level out-of-school suspension. Similar to the results for reading achievement, the relationship between school-level out-of-school suspension over time and students' math test scores is curvilinear. Higher school-level suspension is associated with modest growth in math achievement up to moderate levels of exclusionary discipline. After the mean, achievement begins to decline with increasing suspension ($p < .001$). As Models 2 and 3 show, this relationship is unaffected by the addition of demographic student- and school-level characteristics.

According to Models 4 and 5 (see Table 4), high levels of exclusionary discipline are

harmful even after controlling for other types of discipline and measures of drug, violent, and disruptive incidents. Similar to the findings on reading achievement, inclusion of the variable measuring the level of school violence has a modest suppressor effect on out-of-school suspension. When an interaction between level of violence and out-of-school suspension is included in Model 5, a nearly identical pattern emerges for math achievement. Namely, as with reading achievement, high levels of exclusionary discipline threaten math achievement in all schools but are particularly problematic in organized and non-violent environments. Figure 2 depicts the magnitude of these effects.

As noted in the Methods section, the dependent variable is naturally time-ordered, providing initial support for a causal relationship between disciplinary context and academic achievement among non-suspended students. To assess the robustness of our causal argument, we perform a set of placebo regressions to look for spurious relationships between these variables (see Table 5). In this

Table 4. Mixed-Effects Linear Regression of Academic Achievement in Math (Grade-Normed Percentile Score) among Non-suspended Students on Out-of-School Suspension over Time

	Model 1	Model 2	Model 3	Model 4	Model 5
Time (semesters)	1.318*** (.08)	1.323*** (.08)	3.269*** (.14)	3.377*** (.15)	2.633*** (.15)
Out-of-school suspension (tens)	1.444*** (.10)	1.446*** (.10)	.874*** (.11)	.722*** (.11)	2.668*** (.28)
Suspension-squared	-.026*** (.01)	-.026*** (.01)	-.022*** (.01)	-.015*** (.01)	-.157*** (.01)
Student-Level Controls					
Free/reduced lunch		-.417 (.60)	-.384 (.59)	-.380 (.59)	-.307 (.59)
Special education services		5.371*** (1.85)	4.643* (1.85)	4.594* (1.85)	4.855** (1.84)
Disciplinary infractions		-.677* (.34)	-.797* (.34)	-.878** (.34)	-.862** (.34)
School-Level Controls					
Percent racial/ethnic minority			.901*** (.17)	.850*** (.18)	.222 (.23)
Percent free/reduced lunch			-1.256*** (.14)	-1.178*** (.14)	-.509** (.17)
Percent special education			-.026 (.17)	-.108 (.17)	-.386* (.18)
Expenditures/student (\$100)			-1.076*** (.10)	-1.144*** (.11)	-.260 (.18)
School size (hundreds)			-4.116*** (.65)	-4.779*** (.68)	-4.030*** (.69)
In-school suspensions (tens)				.010 (.06)	-.057 (.09)
Detentions (tens)				.156*** (.04)	.353*** (.06)
Drug-related infractions (tens)					-.941*** (.23)
Violent infractions (tens)					.993** (.33)
Disruptive infractions (tens)					.430*** (.08)
Interaction Term					
Out-of-school suspension x violence					-.297*** (.04)
Suspension-squared x violence					.018*** (.01)
<i>F</i>	70.31***	61.34***	62.61***	58.77***	57.05***
ρ	.89	.89	.89	.89	.89

Note: $n = 16,148$. Unstandardized coefficients, standard errors in parentheses; models control for dichotomous school indicators.

* $p < .05$; ** $p < .01$; *** $p < .001$ (two-tailed tests).

analysis, we predict beginning-of-year percentile scores on achievement tests using school suspensions that occurred during the subsequent spring semester. Without any

control variables (see Models 1 and 4), results indicate there is no statistically significant linear relationship between beginning-of-year academic achievement in reading ($b = .081$,

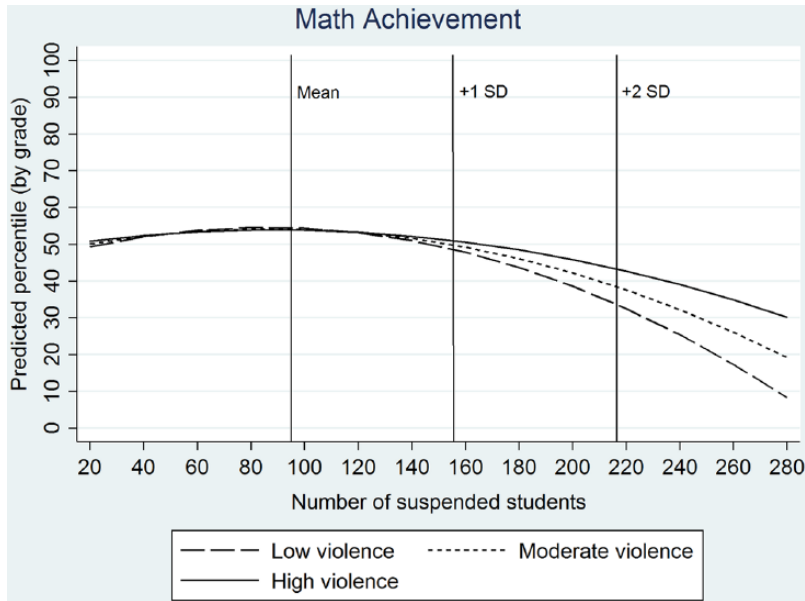


Figure 2. Predicted Values of MAP Math Scores (Percentile) for Non-suspended Students over Time as a Function of School-Level Violence and Out-of-School Suspensions
Note: Based on Model 5 in Table 3; low violence = 1SD below mean; moderate violence = mean; high violence = 1SD above mean.

$p = .65$) or math ($b = .124$, $p = .37$) and school-level suspensions that occurred *after* those test dates, and the coefficients are very small. As Models 2 and 5 show, the quadratic term worsens the fit of the model and is also non-significant. Controlling for all covariates (see Models 3 and 6), the effect of suspensions occurring later in the school year on early reading ($b = -.278$, $p = .36$) and math ($b = -.206$, $p = .40$) scores is also non-significant with modest effect sizes. A plot of predicted probabilities from this model (not shown) depicts a nearly flat line. We can conclude that the effects of exclusionary discipline on student achievement are probably not attributable to reverse causation or to a spurious relationship, providing additional support for a causal argument.

In summary, these findings on the relationship between exclusionary discipline and achievement have significant theoretical and policy implications. The fixed-effects models used here are conservative, comparing school environments and individual students to

themselves in other time points, and controlling for potential time-varying confounding factors. Increasing levels of exclusionary discipline over time are associated with poorer student achievement on end-of-year reading and math tests, net of the overall disciplinary context and level of violence and disorganization in a school. The adverse impact of exclusionary discipline on achievement is not linear, however. Low and moderate levels of suspension do not affect test scores, while the negative effects of high levels of exclusionary discipline are quite strong, consistent with a culture of control argument. Moreover, as the interaction model demonstrates, high levels of exclusionary discipline are most harmful to non-suspended students in otherwise safe and controlled environments. However, even in the most violent and disorganized schools, exclusionary discipline is an ineffective strategy for creating a positive learning environment and may actually exacerbate hostile conditions that lead to lower academic achievement.

Table 5. Placebo Regressions Predicting Beginning-of-Year Percentile Scores on Reading and Math Achievement Tests Using School Suspensions Occurring during the Subsequent Semester

	Reading Percentile			Math Percentile		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Time (semester)	.812*** (.23)	.807*** (.23)	-3.036*** (.90)	1.301*** (.19)	1.314*** (.19)	-4.160*** (.84)
Out-of-school suspension (tens)	.081 (.18)	-.075 (.58)	-.278 (.31)	.124 (.14)	.295 (.48)	-.206 (.24)
Suspension-squared		.009 (.03)			-.009 (.02)	
Student-Level Controls						
Free/reduced lunch			.190 (.87)			-1.184 (.71)
Special education services			-1.289 (2.94)			2.769 (2.36)
Disciplinary infractions			-1.269* (.61)			-.794 (.49)
School-Level Controls						
Percent racial/ethnic minority			-2.284*** (.49)			-3.172*** (.43)
Percent free/reduced lunch			1.524*** (.37)			2.391*** (.32)
Percent special education			-1.228*** (.34)			-1.878*** (.24)
Expenditures/student (\$100)			.974*** (.29)			1.201*** (.25)
School size (hundreds)			-2.838* (1.33)			-4.004*** (1.05)
In-school suspensions (tens)			-.070 (.18)			-.195 (.14)
Detentions (tens)			-.120 (.08)			-.255** (.09)
Drug-related infractions (tens)			3.099*** (.70)			3.620*** (.78)
Violent infractions (tens)			.309 (.50)			.191 (.13)
Disruptive infractions (tens)			.009 (.15)			2.026*** (.44)
<i>F</i>	7.68***	7.28***	6.64***	28.07***	26.60***	20.65***
ρ	.84	.84	.84	.89	.89	.89

Note: $n = 14,738$. Unstandardized coefficients, standard errors in parentheses; models control for dichotomous school indicators.

* $p < .05$; ** $p < .01$; *** $p < .001$ (two-tailed tests).

DISCUSSION

Our findings provide support for the theory that a culture of control in schools jeopardizes student success. Collateral consequences

have appeared in the study of criminal punishment, and our research extends this to education. We find that high levels of out-of-school suspension in a school over time are associated with declining academic

achievement among non-suspended students, even after adjusting for a school's overall level of violence and disorganization. We characterize this effect as a diffusion of control, signaling how the threat and constancy of punishment permeates highly punitive environments, hindering the academic performance of otherwise well-behaved students. Consistent with Arum's (2003) research, we find that exclusionary discipline used in moderation is benign, but that overly punitive environments are toxic. In such situations, punishment becomes an end in itself, not an occasional means to an end of normative social order. These results contradict the most common rationale for maintaining "tough" exclusionary discipline policies—namely, that removing disruptive students creates a safe, orderly environment conducive to learning for students who conform to school rules.

Our findings suggest that punishment is not a discrete response to certain transgressions, but a system of social order that produces wider meanings and consequences (Garland 1990). Punishment is not leveled simply at a single act, or even a single individual, but occurs within a web of social relations, affecting social networks and communicating social messages. Excessive exclusionary discipline may produce social psychological outcomes that endure well after the punishment itself, and well beyond the individual who is punished, interacting with behavior to shape meanings, perceptions, and actions. In highly punitive contexts, the goal of reforming unruly behavior is overtaken by the goal of punishing such behavior, increasing the salience of punishment (Garland 2001; Western 2006) and creating additional problems.

Our results add to critiques of the overreliance on exclusion as a means of social control (e.g., Beckett and Herbert 2010; Western 2006). In particular, our findings align with research on collateral damage resulting from arrest or incarceration that negatively influences family members and others connected to offenders (Kirk and Sampson 2013; Mauer and Chesney-Lind 2002; Wildeman 2010).

Because our work occurs within education, we advance this perspective in a novel direction, providing evidence that exclusion as a means of social control has gained traction beyond the criminal justice system. In addition, we document important spillover effects, revealing that overuse of such measures can create collateral damage across a range of institutions.

These findings complement a new, critical political realization that an overreaching culture of control destabilizes school communities and fosters anxiety and distrust (U.S. Department of Education 2014). Although we do not possess the data to explore underlying mechanisms directly, we propose two explanations for why high rates of suspension hinder the achievement of non-suspended students. First, on an individual level, high-suspension environments can create a heightened sense of anxiety, constituting a *psychological burden of control*. As research in psychology shows, anxiety, especially from being closely watched and evaluated, can lower academic performance (Steele and Aronson 1995). Even well-behaved students in schools with strong cultures of control may suffer from "courtesy stigma" (Goffman 1963:30), which is consigned to individuals who are "related through the social structure to a stigmatized individual—a relationship that leads the wider society to treat both individuals in some respects as one" (see also Harris, Evans, and Beckett 2011; Rios 2011). Non-suspended students likely have social ties to suspended students, such as friendship, kinship, a shared neighborhood, or shared socioeconomic or racial group membership. The more ways they are tied to suspended students (i.e., multiplexity), the more non-suspended students may fear they are also being monitored and suspected of potential transgressions.

Second, on a school level, we theorize that frequent use of suspension *disrupts school communities*. Turnover of suspended students in and out of classrooms creates unstable, socially fragmented environments. A long line of research emphasizes the importance of

school bonds in creating positive outcomes (see, e.g., Alexander, Entwisle, and Thompson 1987; Coleman 1988). However, when school cultures are punitive rather than nurturing and flexible, this can jeopardize feelings of trust and caring between students and school personnel, or even between the students themselves. McNeely, Nonnemaker, and Blum (2002) found that intolerant disciplinary policies and negative classroom management climates are among the strongest predictors of school disconnectedness. In contrast to the popular justification for exclusionary discipline, McNeeley and colleagues (2002) report that students feel *less safe* in schools with harsh disciplinary policies compared to students in schools with more tolerant policies. Such schools are not viewed as caring and supportive, which are critical factors in academic success (Valenzuela 1999). Moreover, work on legal cynicism suggests that the threat of punishment is not a strong push toward rule compliance (Tyler 2006). Overuse of this threat can breed a generalized distrust of formal authority and detachment from social institutions (Kirk and Papachristos 2011). Indeed, our analyses show that high rates of suspension are most harmful to non-suspended students in otherwise safe and orderly schools. This indicates that academic alienation abounds in environments where punishment is detached from the normative social order. In these punitive contexts, punishment can communicate authoritarianism and distrust, rather than the legitimate authority that emerges from and reinforces social connections.

Future research should explore other dimensions of this connection between punitive environment and academic achievement. One avenue is to examine the mechanisms of psychological distress and school bonding directly. This research could also examine the roles that race and school location play in these mechanisms, because racial minorities and students in urban schools show lower achievement than do their White and suburban counterparts, on average (Berends, Lucas, and Penaloza 2008). Research indicates that

school connectedness is particularly important for Black and Latino students' academic success (Valenzuela 1999), yet these students are more likely to attend highly punitive urban schools (Welch and Payne 2010). Moreover, Black and Latino students may feel heightened anxiety and risk of punishment due to prevailing racial stereotypes (Rios 2011). The racialized effects of discipline for students who are not punished is a promising line of future research in exploring achievement gaps by race, class, gender, and school type.

Another important direction for future research is investigating how different disciplinary policies shape student achievement. The school district from which our data are drawn uses a district-wide disciplinary code, so we are not able to assess policy differences. However, since we conducted our analyses, the district has experimented with a policy change in one high school, which has dramatically reduced suspensions.⁵ It would be useful to test whether such changes result in increased overall achievement.

Limitations

First, because this dataset includes every student in one large school district, findings may not be generalizable to other districts, particularly schools in the western United States with larger Latino and smaller Black populations. Second, because of small cell sizes, we are unable to closely examine the effects of different kinds of exclusionary discipline (e.g., in-school suspension and expulsion), although these most certainly contribute to a school's culture of control. Because we consider only out-of-school suspension, we may have underestimated the effects of school-level exclusionary discipline. Third, while our measures are taken directly from school records and therefore are robust to response bias, we lack information on students' attitudes and self-reported misbehavior. Perceptions of the fairness of discipline might be a key intervening factor, which could indicate which disciplinary practices engender

solidarity or alienation in the school context. Likewise, adjusting for self-reported misbehavior rather than student offenses would permit a stronger test of our theory than is possible using these data. Namely, measures of self-reported or student-reported offending would indicate the extent to which the underlying level of deviance drives official rates of offending and academic achievement rather than the punitive context *per se*.

This research has a number of important strengths that counterbalance its limitations. For instance, we use longitudinal models that control for all time-invariant heterogeneity at the school level, as well as important time-variant characteristics (e.g., school expenditures and violent and disruptive incidents), addressing common confounding issues related to neighborhood and school quality. In addition, we use data that are naturally time-ordered in conjunction with placebo regressions, providing a stronger test of causality than do previous studies. Also, our dataset consists of school records on every 6th through 10th grade student in the district and are relatively free from non-response and self-report biases that are particularly problematic in criminology and education research. Finally, we apply the theories of culture of control and collateral damage in novel ways to educational contexts, providing the first-ever test of the influence of school suspension on non-suspended students.

In conclusion, our findings level a strong argument against punitive and control-oriented school policies that result in high suspension rates. Based on our research, these policies threaten the academic success of all students, even students who have never been suspended. Discipline in the public education system is a necessary condition for high achievement, and our findings demonstrate that suspension used in moderation does not have an adverse impact on non-suspended students. However, effective school discipline is not achieved simply through punishment and exclusion. Instead, as Durkheim ([1925] 1973) clarified long ago, the foundation of effective discipline lies in the achievement of “moral authority” based in trust, affirmation,

and caring relationships (Arum 2003; Noguera 2003). Ironically, these are the very processes threatened by overreliance on exclusionary discipline, resulting in declining achievement in public schools.

Acknowledgments

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Notes

1. According to Garland (1990:282), punishment is not “a singular kind of event or relationship” but a complex institution “tied into wider networks of social action and cultural meaning.”
2. An extensive literature describes distrust of formal authority, especially in urban communities (for a representative example, see Anderson 1999). Tyler (2006) finds that trust in the legitimacy of laws and legal authority is more influential for law compliance than is the threat of punishment.
3. Although family structure may have changed during this time period, our dataset includes measures of family structure at only one time point. Without time-varying information on family structure, we cannot examine the effect of changes in this variable on achievement. That said, it is unlikely that changing family structure would confound the association between suspension at the school level and achievement among non-suspended students.
4. Because this study took place during a recession, neighborhood conditions may have changed over time, shaping suspension and achievement. However, any socioeconomic changes in the neighborhood that could affect children are probably captured by the school-level measure of socioeconomic status, because the vast majority of students in this school district attend their neighborhood school. Also, we initially ran models controlling for school migration (i.e., percent of students changing schools mid-year) as a proxy for economic instability. However, we removed this variable because it was not significant and did not alter the relationship between school-level suspension and academic achievement.
5. This encouraging change in policy aligns with the recent (2014) set of guiding principles on school discipline issued by the U.S. Department of Education. This document instructs schools to administer discipline—especially suspension, expulsion, or arrest—judiciously and fairly. Although the federal government cannot change discipline policies in local schools unless such policies are clearly racially discriminatory, we are hopeful that this

change in tone will prompt more schools to reduce their use of exclusionary discipline.

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Brea L. Perry is Associate Professor of Sociology at Indiana University. Her research examines the interrelated roles of social networks, biosociology, and social inequalities. While her substantive focus is usually health and illness, she is primarily motivated by an interest in social network theory, complex and dynamic systems, and hierarchical or longitudinal methodologies.

Edward W. Morris is Associate Professor of Sociology at the University of Kentucky. His research focuses on race, class, and gender inequality in education. He is the author of *Learning the Hard Way: Masculinity, Place, and the Gender Gap in Education* (2012) and *An Unexpected Minority: White Kids in an Urban School* (2006).