

**Reproducing Social Inequality through School Security:  
Effects of Race and Class on School Security Measures**

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School security measures such as on-campus police officers, surveillance cameras, drug-sniffing dogs, and metal detectors have become commonplace in schools across the U.S. in recent years. Yet we know little about how these practices are distributed across schools, and particularly how they correspond to the demographics and social statuses of schools' student bodies. We use nationally representative school-level data from the School Survey on Crime and Safety to consider variation in elementary, middle, and high school security practices. Results suggest that criminal-justice oriented security measures are ubiquitous in high schools across the social strata of the U.S. student population, but that elementary and middle schools of concentrated poverty are more likely to use these security measures than others. Furthermore, race of student body is a powerful predictor of the presence of metal detectors. These race and class effects are observed after school and community crime levels are taken into consideration, suggesting that criminal justice-oriented security may reproduce and exacerbate existing social inequality.

## **Reproducing Social Inequality through School Security: Effects of Race and Class on School Security Measures**

Schools across the U.S. have incorporated a host of security mechanisms in an attempt to maintain safety. According to the National Center for Education Statistics, in the 2007-2008 school year, 58% of public high schools conducted random searches using drug-sniffing police dogs, 77% used surveillance cameras, and 11% used metal detectors to screen students, while 69% of a nationally representative sample of students aged 12-18 reported that their schools included a security guard or police officer assigned to the school (Dinkes et al. 2009: tables 20.2, 21.1). Additionally, in response to federal mandates in the 1990s, some form of “zero tolerance” law is now nearly universal in U.S. public schools (Simon 2007).

In prior research scholars have considered a number of potential consequences of these security mechanisms, including: growing exclusion (through suspension and expulsion) of lower-income youth of and racial/ethnic minorities (Ayers et al. 2001; Hirschfield 2008; Kim, Losen and Hewitt 2010; Skiba et al. 2000, 2006), the creation of a “school to prison pipeline” through increased referrals from schools to courts (Kim et al. 2010; Wald and Losen 2003), and deterioration of the school social climate (Ayers et al. 2001; Brady, Balmer and Phenix 2007; Lewis et al. 2008; Lyons and Drew 2006; Webber 2003), which in turn can lead to reduced student academic performance and increased misbehavior (Gottfredson 2001; Gottfredson et al. 2005). School security policies and practices have also been associated with the development of civic orientations and engagement. Given the powerful socializing effect of schools – whereby students are socialized into future social roles – security measures may condition students to cynically expect societal exclusion achieved through intensive surveillance, the ubiquity of the

criminal justice system, and powerlessness relative to authorities who watch over and police them. Such students may become young adults who do not participate in mainstream political processes and are apathetic towards government policies and institutions (Campbell 2006; Kupchik 2010; Lyons and Drew 2006), having experienced civic alienation or exclusion as a part of their early educational experience. This can happen for students in advantaged social strata and those already marginalized (see Lyons and Drew 2006).

As important as these developments in school security seem to be, we know little about how security approaches are distributed across schools and the factors related to these patterns of distribution. Much of what we do know comes from ethnographies and case studies in limited numbers of schools, which contribute a great deal to our understanding of how the security is implemented, but tell us little about how widespread these practices are, and the populations most impacted. Though many sociologists make statements about the distribution of these practices – primarily that schools with large numbers of poor youth and youth of color have more intense security practices (e.g., Hirshfield 2008; Wacquant 2001) – there is little empirical data to support or specify these claims (for exceptions see Kupchik 2009; Payne and Welch 2010; Welch and Payne 2010).

In this paper we examine variation in school security measures using a large, nationally representative survey of school administrators. We consider how a variety of school security practices are distributed across schools, and particularly how these practices correspond to the demographics and social statuses of their student bodies. Finally, we consider the significance of these patterns in terms of the social reproduction thesis.

## **School Security and Social Reproduction**

The existing research on school security follows the logic of social reproduction, asserting that school security is disproportionately applied to low status youth and that it reinforces and reproduces this low status. This theoretical framework draws directly on works by Bowles and Gintis (1976), and Bourdieu and Passeron (1990), who analyze the role of schools in reproducing inequality (see also Apple 2004; Lewis 2006; Noguera 2003; Rist 1977; Willis 1977). Bowles and Gintis (1976) are particularly focused on how schools socialize students into future labor market roles, whereby lower-socio economic status youth are trained to be laborers while upper-socio economic status youth are trained to be managers. Bourdieu and Passeron (1990) offer a broader perspective, outlining how schools reinforce the hierarchy of cultural capital that delineates among students. Schools teach and reward middle-class norms, while negatively appraising styles and mannerisms that differ. This rewards middle-class students and punishes others by conflating cultural capital with academic ability. This also reproduces and rationalizes existing social inequality by making divisions among groups appear to be the product only of hard work and intelligence (for a thorough review see Lewis 2006).

Though this theoretical perspective is most often applied to understanding social class differentials in academic achievement and future career mobility (e.g., Bourdieu and Passeron 1990; Cookson and Persell 1987), scholars have also used this framework to describe the unequal distribution of school security, arguing that schools serving disadvantaged children (esp. poor and nonwhite youth) have tighter security (including criminal justice-oriented practices such as police officers in school, locked gates, and metal detectors) than schools with predominantly middle-class white students (see Kupchik 2010).<sup>1</sup> Prior research clearly shows that racial and ethnic minority youth, as well as poor youth, are at risk of negative perceptions by school staff (Skiba et al. 2000). Perhaps because of behaviors, manners of speech, or styles of

dress that differ from middle-class white norms, or perhaps because of ingrained stereotypes and biases, school staff often view these youth as loud (e.g., Morris 2007), trouble-makers (e.g., Ferguson 2000), or as having generally negative dispositions (e.g., Bowditch 1993) relative to middle-class white youth. The result of these negative perceptions about their behaviors and abilities is that disadvantaged youth are prepared for presumed marginal social, economic and political roles, marked by a high likelihood of low-wage labor or unemployment, state dependence and supervision, and possible incarceration, while middle-class white youth are prepared for what are expected to be more autonomous and productive social, economic, and political roles (Kupchik and Monahan 2006; Noguera 2003; for a classic study of this labeling process see Chambliss 1973). Thus, consistent with the application of social reproduction theory to the study of academic instruction, we see that behaviors and perceptions of marginalized students lead to differential treatment across strata through school security and discipline. Consider, for example, Loic Wacquant's description of public schools in the "hyperghetto;" here he illustrates how select schools reproduce social marginality by treating marginalized youth as prisoners, thereby conditioning them to anticipate and accept "custody and control":

Public schools in the hyperghetto have similarly deteriorated to the point where they operate in the manner of *institutions of confinement* whose primary mission is not to educate but to ensure "custody and control." . . . The carceral atmosphere of schools and the constant presence of armed guards in uniform in the lobbies, corridors, cafeterias, and playgrounds of their establishment habituates the children of the hyperghetto to the demeanor, tactics, and interactive style of the correctional officers many of them are

bound to encounter shortly after their school days are over (Wacquant 2001: 94-95, italics in original).

Thus, a social reproduction perspective suggests that youth who are socially, economically, and politically marginalized – poor and racial/ethnic minority youth – will have different experiences than other youth vis à vis school security and discipline. Marginalized youth are presumed to be young criminals and treated as such through exposure to criminal justice oriented practices (e.g., police surveillance and metal detectors), while youth with social, political and cultural capital are presumed to be well-behaved, treated as such, and empowered to be productive citizens. Furthermore, this disparity in school security can have profound consequences on students' social mobility, since suspension, expulsion and arrest each limit their future educational and employment prospects (e.g., Bowditch 1993; Davies and Tanner 2003; Hjalmarsson 2008; Sweeten 2006; Western 2006).

While compelling, critical social reproduction arguments like these are often either hypothetical – using overall trends and anecdotes to draw conclusions – or based upon ethnographic or other case studies. As Hirschfield states in a recent article: “A reasonable proposition induced from journalistic and ethnographic accounts is that large, hyper-segregated school districts like New York City (NYC) and Chicago, which have placed city or school district police departments in charge of school security, are the most criminalized” (2008: 83). Prior research has helpfully revealed the shift in school security strategies, and the injustice and counter-productivity of these developments in particular schools, but relies mostly on “reasonable proposition” rather than data from diverse school settings to reach conclusions about their generality and significance. Our understanding of the scope of contemporary school

security measures, and its relation to the social reproduction thesis, would benefit from this broader empirical perspective.

There are good reasons to believe that existing critiques of school security as a form of social reproduction are valid. Perhaps the most important one is that there is a mountain of evidence finding that individual students who are poor or racial/ethnic minorities are more likely than others to be punished in school, even while controlling for self-reported misbehavior rates (e.g., Eitle and Eitle 2004; Ferguson 2000; McCarthy and Hoge 1987; Raffaele Mendez and Knoff 2003; Reyes 2006; Skiba et al. 2000; Skiba and Rasch 2006; Skiba et al. 2006; Wu et al. 1982). The prior research leaves little doubt that social class and especially race matter in very important ways, since school discipline is in large part a function of class- and race-based stereotypes. As we note above, teachers and other school personnel may be more likely to view youth of color as loud, threatening, and unruly, and are quicker to punish these youth than white youth (Bowditch 1993; Carter 2005; Delpit 2006; Downey and Pribesh 2004; Ferguson 2000; Lewis 2006; McCarthy and Hoge 1987; Morris 2005, 2007; Townsend 2000; Vavrus and Cole 2002).

We also know that school funding varies considerably among schools, with impoverished inner-city schools that host mostly students of color facing more severe financial shortages than suburban schools (Anyon 1997; Lyons and Drew 2006). As Jonathan Kozol (2005; 1991) and others have made abundantly clear, inequities in school funding create a tiered educational system that Kozol (2005) calls “apartheid schooling.” Financially secure schools may invest discretionary funds in counselors, mediation hearings, and other mechanisms to maintain school safety, measures that are expensive but geared toward childhood development (i.e., inclusion) rather than punishment and exclusion. Financially insecure schools lacking funds for inclusive

programs may turn to policing tactics (i.e., on campus police, surveillance cameras, or metal detectors) which may be subsidized by federal and state government.<sup>2</sup> Thus, inequity in school funding may translate into disparate school security practices relevant to the reproduction of youth and community inequality.

Schools might also implement security in response to practical issues in a way that supports the social reproduction thesis. Since schools with large concentrations of poor youth and racial/ethnic minorities tend to be located in higher crime areas, schools might respond pragmatically to an elevated local crime threat by implementing tighter security. For example, in *Maximum Security*, in which anthropologist John Devine (1996) describes his multi-year study of security in New York City public schools, Devine is very critical of the harsh security there but realistic about the dangers students face in the schools he studied. Since the schools he studied criminalized student misbehavior, subjecting problem students to formal, legal sanctioning, they reinforced the appearance of crime problems and bolstered the apparent legitimacy of disparate crime control measures in these areas.

There are sound reasons to expect that the social reproduction thesis explains variation in security mechanisms across different schools, however, there is presently little empirical basis for assessing this expectation. A major research limitation has been the primary focus on within-school rather than between-school differences. *Within-school* analyses at the individual level showing that lower-income and racial/ethnic minority students are at greater risk of severe security and discipline does not necessarily mean that one sees similar *between-school* effects (i.e., that schools serving primarily minority or poor students rely more than other schools on invasive security strategies). Though schools serving marginalized youth receive funding that reflects this marginal social status, it is not clear that this translates into differences in security,

especially since surveillance cameras and other security mechanisms can be expensive - even if less expensive than inclusive responses such as hiring trained adolescent counselors, and potentially subsidized through state and federal grant programs (Lohman and Shephard 2006). While it seems reasonable to expect that schools in high-crime areas are sensitive to these contextual factors, this does not mean that they will respond in an identical way, and it may be that other contextual factors (i.e., types of crime problems, characteristics of the student body, geographic region, levels of parental involvement, etc.) condition the response. Ultimately, there is a need to examine between-school differences using nationally representative data to understand how well the social reproduction framework accounts for variation in the deployment of school security strategies, and the specific school and community factors associated with these trends.

In recent studies of school discipline and security in four high schools located in two different states, Kupchik (2009, 2010) has questioned the applicability of the social reproduction thesis to comparisons between schools. Though he finds that the class and racial/ethnic compositions of the student body relates to how security measures are employed, Kupchik finds that the high schools he studied serving lower-income youth of color and those serving middle-class white youth have all adopted similar harsh, exclusive discipline and security strategies that mirror criminal justice practices. Though racial stereotypes and students' social capital do influence schools' security-related rules and practices, Kupchik argues that there are many more similarities in these school's security strategies than social reproduction theory and prior research suggest.

This finding relates a central point made in Jonathan Simon's (2007) recent book, *Governing Through Crime*: that the logic of crime control has become a dominating paradigm

used to govern insecurity and risk. One can see the influence of governing through crime in nation-wide policies, such as a requirement of zero-tolerance policies, as well as financial incentives to schools for police and other security measures, such as those provided in the “Secure Our Schools” Act of 2000 (see U.S. Congress 2000; U.S. Dept. of Justice 2011). Simon illustrates how governing through crime has influenced rules and practices in schools (and elsewhere) across social strata; he states that “The very real violence of a few schools concentrated in zones of hardened poverty and social disadvantage has provided a ‘truth’ of school crime that circulates across whole school systems” (Simon 2007: 210). Additionally, in their comparison of suburban and urban schools, Lyons and Drew (2006) find both similarities and differences in school discipline practices. Though they observe disparities that are predicted by social reproduction theory, and particularly that zero tolerance culture reproduces social stratification based on race, class and gender, they also describe how even privileged students in affluent suburbs are subjected to rigid security and harsh punishments.

To our knowledge, only two published studies offer large-scale empirical tests of whether student social status (measured at the school level) is related to disparities in school security or discipline across schools. In two recent articles, Payne and Welch (2010) and Welch and Payne (2010) analyze a nationally representative sample of public middle schools and high schools to determine whether racial threat (operationalized as the percentage of black students at each school) is related to harshness of school discipline. Harshness of school discipline is measured via scales computed using a number of school administrator survey responses; it refers to how extreme of a response schools give when students misbehave, so that a school that responds to student misconduct by expelling the student, calling the police, and other harsh exclusionary responses would have a high score on their dependent variables. They find that the percentage of

a school's student body that consists of black students is positively related to harsh discipline, and negatively related to mild or restitutive disciplinary responses. Thus, race/ethnicity is shown to be related to harsh discipline in this between-school comparison. Socio-economic status is included as a control variable in their analyses as well; though their results for SES are less robust or consistent across the two papers than their results for race, they find that schools with more youth receiving free or reduced-price lunch are less likely to use mild or restitutive practices and more likely to use punitive practices.

Yet we still know little about what specific measures are in place across schools. As Kupchik discusses, though schools with more lower-income youth of color may punish students more harshly than middle-class white schools, the middle-class white schools still implement a number of criminal justice-oriented security measures, such as police in schools, mandatory arrests for even minor fistfights, and surveillance cameras (2010). Thus it is important to also consider the specific measures used across schools to understand the spread of school security throughout the U.S. and its potential for reproducing social inequality.

Furthermore, it is also important to disentangle the mix of school security measures that might at first appear to be very similar, since even subtly distinct measures might have different social meanings or consequences. Hirschfield makes this point as follows:

While suburban schools are hardly immune from criminalization, criminalization in these contexts takes on more diluted or hybridized forms owing to the primacy of competing ideals like consumer choice and individual freedom ... (2008: 84)

He continues to hypothesize how different security technologies connote different modes of discipline, with some more able than others to fit the contradictory aims and discourses that are expected at middle-class (but not lower-class) schools, such as protection and efficiency coupled with physical coercion. He suggests surveillance cameras, for example, are unobtrusive while invasive, since they watch over students and record their actions but without actually obstructing their movement, and thus they are more likely to be used in suburban schools. In contrast metal detectors are less ambiguously about control, since they involve a physical search that often requires students to wait on line before entering school, and thus they are more common in inner-city schools (Hirschfield 2008; see also Casella 2001). Again, though this is reasonable, it remains to be tested empirically; though bivariate statistics do illustrate some of these relationships (such as the greater likelihood of surveillance cameras in suburban schools), more rigorous empirical analyses are needed to understand the similarities and differences in contemporary school security practices.

In sum, there is good reason to expect that social reproduction theory describes how school security measures are distributed across schools, whereby schools with large populations of poor students and racial/ethnic minority students are more likely to use measures that mirror criminal justice practices, such as drug-sniffing dogs, metal detectors, armed police, surveillance cameras, and the like. Yet there is little empirical evidence to support these expectations. Following prior research, we hypothesize that the likelihood of elementary, middle, and high schools using these security measures positively relates to the race and class composition of the student body.

## **Methods**

To consider the variation in school security practices across schools, we analyze the restricted version of the 2005-2006 School Survey on Crime and Safety (SSOCS).<sup>3</sup> The SSOCS is a nationally representative survey of school administrators managed by the National Center for Education Statistics on behalf of the Federal Department of Education's Institute of Education Statistics, and conducted by the U.S. Census Bureau. The 2005-2006 survey was the third such survey distributed since 1999-2000. Survey respondents were selected using a stratified sampling design, with a sampling frame of all regular public schools (and charter schools) from the National Center for Education Statistics' Common Core of Data Public School universe file, resulting in a sample of 2,720<sup>4</sup> schools. In Table 1 we describe the characteristics of this sample; for additional details about the sampling process, see Bauer et al. (2007).

#### TABLE 1 ABOUT HERE

#### *Dependent Variables*

The SSOCS data are well-suited for our research question because they include a series of questions about security measures. We consider the likelihood that the responding school administrator answered affirmatively to questions about whether in his/her school: there are surveillance cameras, there is a full-time school resource officer or law enforcement officer,<sup>5</sup> the grounds have locked/monitored gates, either students or visitors must pass through metal detectors (including random metal detector checks on students), or there are random checks using drug-sniffing dogs. Each dependent variable is dichotomous, indicating the presence or absence of each security measure.

### *Independent Variables*

Our primary independent variables relate to the aggregate status of each school's student body, as reported by the school administrator. To measure race/ethnicity, we include the percentage of the enrolled students who are racial/ethnic minorities. Our measure of socio-economic status comes from the percentage of students who receive free or reduced-price lunch.<sup>6</sup> We also include variables for the percentage of students who have limited proficiency in English, who are enrolled in special education curriculum, and who score below the 15<sup>th</sup> percentile on standardized tests, since each may be an alternate measure of marginalization or subordinate status (see Noguera 2003). English proficiency is likely related to immigration status and may denote a lack of political capital (Levine-Rasky 2009), while large numbers of poor standardized test performers are a liability for schools in an era of accountability via high-stakes testing (see Lawrence 2006; Simmons 2007).

As an additional measure of aggregate social status, we also include a variable indicating parental involvement in school academics and social events. Given prior research by Annette Lareau (2003) that illustrates the variations in middle-class and lower-income parents' interactions with the school – whereby middle-class parents participate actively and can influence school functioning, and lower-income parents are less involved in the school, since they are more likely to trust the running of the school to the educational professionals – we take this to be a measure of parents' political capital, which is directly related to social reproduction theory (see also Noguera 2003; Lewis 2006). This variable is the mean response to a series of questions including the percentage of parents who: participate in open house or back to school night, participate in teacher/parent conferences, participate in subject area events, and volunteer at the school. Each of these original variables is coded along a four-point scale (1=<25%, 2=26-

50%, 3=52-75%, 4=76-100%), and the resulting index achieved high inter-item reliability (Cronbach's alpha=.82).

We also recognize that schools exist within communities and can be dramatically affected by local politics. For example, prior research illustrates how issues as varied as school funding (Anyon 1997; Kozol 1991, 2005; Lyons and Drew 2006), curricula and teaching methods (Kozol 2005; Rile Hayward 2000), and even discipline strategies (Grant 1988) are affected by local politics, economics, and race relations. In other words, since "all politics are local", it is important to consider the way in which the national trend of school security borrowing criminal justice practices is shaped by local influences. To consider how the local community and local community agendas shape school security, we explore the extent to which schools' security practices are shaped by community groups and institutions such as parents' groups, law enforcement, local businesses, and religious institutions. We include several variables related to parental and civic involvement specifically in school security efforts; the SSOCS includes a series of questions asking administrators whether each of several community groups were involved in the school's "efforts to promote safe, disciplined, and drug-free schools." These groups include parent groups,<sup>7</sup> social services agencies, juvenile justice agencies, law enforcement agencies, mental health agencies, civic organizations/service clubs, private corporations/businesses, and religious organizations. To explore the potential role of community agency in negotiating local school safety discussions and security efforts we include a dummy variable indicating the participation of each group.

We also consider the extent to which school security varies across geographic regions. While the punitive turn in American criminal justice has been a nationwide phenomenon, it is significantly rooted in the political and social policy environments of the U.S. South and

Southwest (Lynch 2009; Gilmore 2007). These regions have led the nation in adopting “tough on crime” legislation and policy, both through their own state governments and the influence of federal representatives. To the extent regions maintain distinct “cultures of control” (Barker 2009), school security may vary according to the regional locations of schools. Though neither individual schools nor states are identifiable in the SSOCS, the dataset includes a variable for region. Using this, we include dummy variables for midwest, south, and west regions, which allow us to compare school security in these regions relative to schools in the northeastern U.S.

Another important potential predictor of the school security environment is the actual problem of school misbehavior as well as crime and delinquency in the school and surrounding community (Devine 1996). To account for the fact that schools with greater crime problems might implement tighter security to deal with these problems, we include a number of variables related to levels of student and school-area crime and disorder. Each of these variables measures the total number of incidents of a certain type of misbehavior or crime: violence (including the total number of rapes, sexual batteries, robberies with weapon, robberies without weapon, attacks with weapon, and attacks without weapon), weapons (number of possession of firearms and possession of knives/sharp objects), alcohol and drugs (numbers of possession or use of alcohol and distribution of drugs), and threats (number of threats with a weapon and threats of attack without weapon). We also include the reported number of incidents of theft/larceny, and of vandalism. Additionally, we computed an index measuring school disorder; this index is the mean of responses to a series of questions about the perceived frequency (on a scale of 1 to 5 that was recoded so that higher values now reflect greater frequency) of the following problems: student racial tensions, student bullying, student sexual harassment of student, verbal abuse of teachers, student disorder in classroom, student acts of disrespect, student gang activities, and

student cult or extremist activities (Cronbach's  $\alpha=.81$ ). Further, we control for administrators' perceptions of the level of crime in the neighborhood surrounding each school, along a scale of 1-3, recoded so that greater values reflect higher perceived levels of crime. As a final control for perception of student behaviors, we also include the reported average daily attendance rate.

Importantly, we include each of these student behavior variables as control variables rather than to test theories about the relationship between student behaviors and security measures. Since these data are cross-sectional, we are unable to interpret whether relationships between perceptions and reported incidence of violence, for example, are objective indicators of behavior or the result of school sensitivity to these issues. It is likely that school concerns and policies related to security are incident-generating themselves, somewhat irrespective of actual student or community youth misbehavior. These control variables are intended to help isolate how student social status is related to security practices net of actual or perceived misbehavior and crime rates, though we expect perceptions of disorder may be correlated with student body status characteristics.

Other control variables include the size of the student population and whether the school is a "nontraditional" public school (this includes charter schools and magnet schools). And, we include dummy variables for location: urban fringe, town, and rural, with urban excluded as the contrast.

Several of our continuous independent variables, such as student population and percentage of students who in special education curriculum, are positively skewed and introduce the potential problem of influential outliers. To reduce this potential problem we transform each continuous variable by including its natural log;<sup>8</sup> we do this for all independent variables other

than the dummy variables (region, location, and agency involvement in school safety), our one ordinal variable (crime at school) and the indexes computed as means (parental involvement and school disorder).

### *Analytic Strategy*

Because each of our five dependent variables is dichotomous, we use logistic regression to estimate the odds of a school using each security practice. Given the many differences one might find across different levels of schooling, we consider elementary schools, middle schools, and high schools separately; we exclude schools that identify as being combined grade levels (n=140). After estimating our primary models, we then further explore these results by estimating the predicted probability of different categories of schools using each security practice; here we manipulate the percentage of students who receive free or reduced-price lunch, while keeping all other variables at their means.

All analyses are performed using survey-specific commands in Stata/SE 11.1. The models are adjusted in two ways. One is that we use the weighting variable provided in the dataset to accommodate for unequal probability of selection in the survey sample; the provided weight handicaps each case's score to reflect the probability of sample selection (see Bauer et al. 2007). The second is that since we compute models separately for each level of school, we specify the subpopulation included in each analysis. This option within Stata accommodates subpopulations while still accurately computing standard errors; without specifying the subpopulation, the standard errors might be biased, since the survey design structure assumed within the STATA survey command would no longer be valid.

Prior to releasing the dataset, the National Center for Education Statistics imputes missing values for most variables (for details, see Bauer et al. 2007). The only variable in our

analyses for which missing data are not imputed is the percentage of minority students in each school. We hesitate to impute missing values for this, since it is central to our analysis and we do not wish to distort the data in any way, and also because missing data on this variable represents a relatively limited problem. Across school levels, there are a total of 70 cases with missing data on this variable, which we exclude from the analysis. After excluding these cases and the combined grade-level schools, our sample includes n=700 elementary schools, n=920 middle schools, and n=890 high schools (total sample n= 2,510).<sup>9</sup>

## **Results**

### *Logistic Regression Models*

The results of the logistic regression models are presented in Table 2; this table shows the exponentiated coefficient ( $\text{Exp}(B)$ ), or the change in the odds of a school having each security mechanism associated with an increase of 1 in each independent variable, separately for each school grade level. As we describe above, we are particularly interested in whether school-level race/ethnicity and socio-economic status shape the likelihood of using each security practice; these results are highlighted using boldface type.

TABLE 2 ABOUT HERE

Our results for student body race/ethnicity illustrate the importance of considering security measures separately, since we find a large effect supporting the social reproduction thesis for the presence of metal detectors but for no other security practice. On the one hand, regarding most school security measures, we see that schools with various populations of

minority youth have implemented similarly extensive security regimes. This finding suggests some convergence, in that extensive school security systems are found across social strata, and diverse students have grown subject to similar forms of control (see Kupchik 2010; Simon 2007). On the other hand, schools with larger proportions of racial/ethnic minorities are significantly more likely than others to have metal detectors. Importantly, this is true for each level of school (elementary, middle, and high), and after controlling for location in an urban setting and area crime rates. Since we also control for weapons offenses at schools, this result seems to be driven by assumptions rather than observations: that is, school officials may respond to often implicit associations between racial/ethnic minorities, violence, and use of weapons (Eberhardt et al. 2004). We also see that high schools with larger proportions of minorities are less likely to use drug-sniffing dogs, though this effect is not significant for either elementary or middle schools.

Our most direct measure of socio-economic status, the percentage of students receiving free/reduced lunch, is significant and positive in seven of the fifteen models. Higher percentages of poor students are predictive of greater odds that schools have: an SRO or law enforcement officer in elementary and middle schools, locked gates in elementary schools, metal detectors in middle schools, and drug-sniffing dogs in each type of school. Overall, while controlling for student behavior and other potential predictors of security, we find that schools with larger numbers of poor students rely more than others on formal policing and drug-sniffing dogs. These findings suggest that general trends toward policing in schools and criminalizing student misconduct may be unique structural features of schools serving the poorest youth and communities.

Importantly, our results suggest that the effect of socio-economic status is greatest *earlier* in the educational process, since poverty status is a significant predictor of security at the elementary or middle school levels rather than in high schools. This relationship between student poverty and elementary or middle-school security suggests dynamics beyond fiscal constraint and government incentives. That is, when it comes to young children, poverty appears to have particular salience as a marker of potential criminality or need for school security. This also suggests that the experience of policing in school and criminalization of student misconduct begins earlier for students attending schools with concentrated poverty, potentially contributing to short and long-term disparities in educational achievement.

Results for our measure of parental involvement are interesting as well. Elementary and high schools with higher levels of parental involvement in academic and social events (open houses, parent/teacher conferences, subject area events, and volunteer efforts) are more likely to have an SRO or law enforcement officer, and high schools with high levels of parental involvement are more likely than others to have locked gates. However, both elementary and middle schools with higher levels of parental involvement in academic and social events are less likely to have metal detectors. Assuming that greater parental involvement provides some parental capacity to shape school policy (see Blankenau and Leeper 2003) this result suggests that parents may advocate for police officers in schools as protection for their children (see Casella 2001), while resisting metal detectors, perhaps for their stigmatization of students and disruption of the learning environment.<sup>10</sup>

The percentage of youth who are in English as a Second Language class is negatively related to the odds of having cameras in middle schools, metal detectors in middle school and high school, and drug-sniffing dogs in high schools. Yet this variable is positively related to the

odds of having locked gates in middle schools. Our other proxies of social capital, the percentage of students who are in Special Education classes and the percentage who score low on standardized tests, are weak predictors of school security measures.

Next we turn to our variables indicating how the involvement of different agencies, groups and institutions in schools relates to security measures. As one would expect, schools where law enforcement and juvenile justice agencies participate in school security efforts are more likely to have full-time SROs or law enforcement officers on campus, but there are few other agency variables that relate in any consistent fashion to school security. The most consistent and robust predictor reflects an influence of private businesses, since schools with private business participation in school security are more likely to have cameras (among middle schools only), locked gates (elementary and middle schools), and metal detectors (elementary schools only). Though only one of these community group variables is a consistent predictor of multiple types of security practices, and some (e.g., social service agencies) are inconsistent predictors of security (related to higher odds of some practices and lower odds of others), these results are interesting for two reasons. One is that this set of results illustrates that local community politics shape school security (see also Blankenau and Leeper 2003), albeit in complex and potentially contradicting ways. The second is that there does seem to be a pattern regarding private businesses, whereby partnerships with private businesses might bring about increased security and control over youth. We cannot tell from our data whether this is because businesses entering these relationships are security providers (e.g., Casella 2006), because they request that the schools protect them from adolescents they perceive as threats, or for other reasons.

School size and location also relate to security methods. Larger schools are more likely to have most of the security mechanisms we consider, presumably because larger schools can be more chaotic and difficult to manage. Region is an important consideration in criminal punishments, broadly, and it appears to be an important but inconsistent determinant of school security as well. Schools in each region other than the northeast – and especially in the south – are more likely than those in the northeast to employ each of the security measures except surveillance cameras and metal detectors. It appears that school security mirrors broader punishment and social control trends, with more exclusive and punitive practices in the south (e.g. Lynch 2009). Urbanicity matters as well, even while controlling for race/ethnicity and socio-economic status of student bodies. Urban high schools are more likely than high schools in urban fringe areas and towns to have metal detectors; in conjunction with the robust results linking race/ethnicity to the presence of metal detectors, this result suggests that urban schools hosting large populations of youth of color are distinguished by the presence of metal detectors, but not other forms of school security. Interestingly, urban schools are *less* likely than other schools at each level to have drug-sniffing dogs, and rural schools are more likely to use this security measure.

Average daily attendance is not related to any security measure, and the various measures of crime and misbehavior are only weakly and inconsistently related to school security. Perceived crime in the school neighborhood is positively related to metal detectors in middle and high schools, and negatively related to drug-sniffing dogs in high schools. Incidents of student violence do not significantly relate to any school security measure, weapons incidents significantly predict metal detectors in elementary schools only, and alcohol and drug use is a significant predictor of the use of drug-sniffing dogs only in middle schools. Though we are

unable to test causal relationships with these variables, due to the problem of specifying temporal order, we nonetheless find it interesting (even disturbing) that there are no consistent relationships between students' reported levels of criminal behavior and the adoption of school security measures.

### *Predictions for School Categories of Free/Reduced-Price Lunch*

Of our two primary independent variables related to the social reproduction thesis, free/reduced-price lunch was found to have a more consistent and robust effect on various school security practices, particularly among elementary and middle schools. To better illustrate the effect of socio-economic status, we predict the probability of different categories of elementary and middle schools having each security mechanism. While holding all other variables at their means, we estimate the probability of high schools having each security practice under three conditions: a) concentrated advantage: 10% receiving free or reduced-price lunch, b) integration: 50% receiving free or reduced-price lunch, and c) concentrated disadvantage: 90% receiving free or reduced-price lunch. These predicted probabilities, which we graph in Figure 1 for elementary schools and Figure 2 for middle schools, show a consistent pattern for most security practices, whereby the estimated probability is lowest in conditions of concentrated advantage and highest in schools with concentrated disadvantage. There are two exceptions to this observation, both of which apply only to elementary schools: 1) the relationship is reversed for surveillance cameras (though this relationship is not significant in the regression models shown in Table 2) and, 2) there are too few metal detectors in elementary schools to consider this relationship.

FIGURE 1 ABOUT HERE

## FIGURE 2 ABOUT HERE

Figures 1 and 2 illustrate the importance of considering cumulative effects on the link between student status characteristics and school security. If one were to consider only regression coefficients for student socio-economic status, as prior research tends to do, then important substantive effects of concentrated advantage and disadvantage might go overlooked. Instead, by distinguishing schools according to thresholds of socio-economic stratification, we identify an apparent buffering effect of concentrated advantage, and the preponderance of criminal justice-related security measures in elementary and middle schools of concentrated poverty.

### **Discussion**

By analyzing nationally representative data from public schools, we provide an empirical examination of school and community characteristics related to the use of various school security measures. Our results generally support prior arguments about social reproduction, adding a generalizable empirical perspective that bolsters prior hypotheses and findings (see Payne and Welch 2010; Welch and Payne 2010), while also helping to specify these claims. Our key findings are that social reproduction theory seems especially supported in the case of elementary and middle school security, where poverty helps to account for variation in the adoption of school security measures, and in the case of metal detectors, which are far more likely in schools with large populations of racial/ethnic minority students. Importantly, we find these results while controlling for several categories of student misbehaviors and crimes, as well as for perceived level of crime in the school's neighborhood.

Contrary to the social reproduction thesis, our findings suggest the ubiquity of most school security measures across American *high* schools. This runs counter to expectations that poorer, predominantly nonwhite, urban schools are uniquely inclined towards the adoption of criminal justice-related security measures (e.g., Noguera 2003; Wacquant 2001). As Kupchik (2009, 2010) has suggested in prior research on high school security, elaborate security measures appear to be common to modern high schools, somewhat irrespective of high school setting and student body characteristics.

Our findings thus help to confirm the relevance of the social reproduction thesis to the adoption of school security measures. Moreover, the fact that we do not find that race and poverty are significant predictors of school security in each model helps us to fine tune our understanding of school security by specifying the relevance of the social reproduction thesis. For example, the concentration of nonwhite students relates to the adoption of metal detectors in all schools, including high schools, even when controlling for levels of crime and violence (including weapons offenses) in these schools, and perceptions of crime problems in their surrounding communities. This finding mirrors individual-level research on school discipline suggesting that teachers and school administrators rely on racial stereotypes of threat in interpreting student behavior, and raises concerns about race and the quality of education. Metal detectors are not only criminal justice-oriented measures which may stigmatize nonwhite student populations, but are understood to be minimally effective and disruptive to learning environments.<sup>11</sup> Though our data do not allow us to assess consequences of security measures, the selective use of metal detectors in schools with more nonwhite students suggests that detrimental impacts of security are disproportionately borne by such students (see Hirschfield 2008).

Social reproduction theory is most clearly supported in the case of elementary and middle schools. Each security mechanism other than locked gates is less common, overall, in elementary and middle schools (see Figure 3). However, elementary and middle schools with concentrations of poor students are uniquely inclined to employ most of the security measures we consider. Thus where school security measures are less ubiquitous – in elementary and middle schools – race and class status characteristics are more clearly related to their use.

### FIGURE 3 ABOUT HERE

Our findings not only support but extend prior research in various ways, while also raising questions which await further research. One new direction for future research is to empirically study the role of federal financial incentives in shaping the implementation of school security measures. Above we refer to the Secure Our Schools Act of 2000, which provided funding for measures such as metal detectors, locks, lighting, security assessments, and security training. It is unclear whether the availability of federal funding for these measures has encouraged financially unstable school districts to adopt these measures in greater numbers than other schools, who may have the means to resist such narrowly targeted financial incentives. Since schools receive their funding through complex and varying combinations of local, state, and federal sources, we are unable to consider funding source in our analyses. Yet we recognize that this public funding is a clear illustration of governing through crime, and suspect that it has an important role in the unequal distribution of school security measures.

We also extend the existing literature by considering how security varies across regions of the U.S. Our findings reveal that western, Midwestern, and southern states are distinct from the northeast in their adoption of school security measures, suggesting that the punitive public and political cultures of these regions filters into school environments. This is particularly

evident in the policing of schools in the south, the more common adoption of metal detectors in elementary schools outside the northeast and especially in the midwest, and the use of drug-sniffing dogs in middle and high schools outside the northeast.

Our regional findings relate to a more general observation that local culture and politics substantially shape school security, although inconsistently. It is unclear to us why schools in which some community agencies participate in school safety are more likely to use some security practices, while the involvement of other community stakeholders lowers the likelihood of certain practices. Perhaps this ambiguity is due to conflicting perceptions and uses of security, or variation in stakeholder interests. For example, Lyons and Drew (2006) point out that security measures like locked doors and lockdowns are framed by the school as a way to protect students, and thus they may be requested by parents or other community groups; in practice, however, these security mechanisms are used to police the students inside, assuming a threat that emanates from students rather than sources external to the school. Business partnerships are related to more extensive security, perhaps because of business interests (i.e., in providing security or controlling student populations), or because of an unobserved characteristic of the school communities where these partnerships are more common (i.e., political conservatism). Future research, particularly qualitative research that considers the nature of community agency involvement in school security, can help shed more light on these interesting results. At this point we can only conclude that school communities are organized much like court communities, where control strategies are intertwined with local, state, regional, and national characteristics.

Our findings also suggest the need for further research on the consequences of widespread adoption of school security measures in American high schools, and more selective adoption in elementary and middle schools with concentrated populations of nonwhite or poor

students. As our analyses demonstrate, security practices are not equally likely everywhere, and schools serving poor youth and nonwhite youth are more likely to use most of these practices, but more advantaged schools are far from exempt. Rather, consistent with recent arguments by Simon (2007) and Kupchik (2010), high schools across social strata rely on exclusive, criminal justice oriented security practices. Thus, though the distribution of school security across schools does indeed correspond to the social reproduction thesis in many ways, we find that these exclusive school security practices have become a part of the social fabric for all high schools, and that control elements of social reproduction are converging. The social causes and consequences of this convergence await further research.

The social reproduction framework suggests that inequalities among students within school lead to school practices which reproduce this stratification. Disparities related to the criminalization of school misconduct are considered a potential mechanism in this process; that is, marginalized students are more likely to be subjected to rigid, criminal justice oriented security, such that the misbehavior of more disadvantaged students is more likely to be noticed and result in formal school punishment or arrest and criminal sanctions. Our analyses show that this structural mechanism is most apparent in the case of elementary and middle schools of concentrated poverty. While prior school security research has focused on high schools, this finding suggests an urgent need for more research on school security at these lower school levels, and its potential implication in the reproduction of youth and community inequality.

We are now decades into a national, federally-subsidized investment in school security measures which draw on crime control strategy. Contemporary schools evidence elaborate security system, somewhat irrespective of region, student status characteristics, and level of education, consistent with this historical development. Our findings confirm while also

specifying previous suggestions that race and class inequalities relate to the adoption of these measures. Further research is needed to confirm whether or not and how such disparities in school security translate into the reproduction of inequality. At the same time, the prominence of security systems across high schools suggests some convergence in the experience of social control, and raises a more general social reproduction question. That is, how has this era of unprecedented policing, surveillance, and other crime control strategies within American schools socialized this generation of students (see Kupchik 2010)? How does this the new school security regime affect school safety and, as significantly, educational achievement or aspiration? These questions are important to consider for all students but perhaps most of all those whose formative early educational experiences are in elementary and middle schools marked not only by concentrations of poverty, but police officers, locked gates, and drug-sniffing dogs.

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**Table 1. Summary Statistics**

	Mean	Std. Dev.	Range
<b>Region</b>			
Midwest	0.26	0.44	0-1
South	0.24	0.43	0-1
West	0.32	0.47	0-1
Northeast	0.18	0.39	0-1
<b>School Characteristics</b>			
Nontraditional school	0.07	0.25	0-1
Number of students (ln)	6.47	0.79	1.39-8.54
Neighborhood crime	1.30	0.58	1-3
Location: urban	0.26	0.44	0-1
Location: urban fringe	0.38	0.49	0-1
Location: town	0.10	0.30	0-1
Location: rural	0.26	0.44	0-1
Parent involvement in school	2.55	0.77	1-4
Disorder	4.03	0.55	1.5-5
Violence (ln)	2.17	1.25	0-5.97
Thefts (ln)	1.26	1.14	0-4.39
Weapons offenses (ln)	0.77	0.77	0-3.43
Alcohol/drugs (ln)	1.02	1.14	0-4.44
Vandalisms (ln)	1.02	0.97	0-4.11
Threats (ln)	1.49	1.35	0-5.86
Attendance (ln)	4.54	0.20	0.69-4.62
Percent ESL (ln)	1.40	1.23	0-4.62
Percent special education(ln)	2.54	0.58	0-4.62
Percent low test-takers (ln)	2.30	0.94	0-4.62
Percent racial/ethnic minority (ln)	3.03	1.21	0-4.62
Percent free/reduced lunch (ln)	3.45	0.94	0-4.62
<b>Community Groups' Involvement in School Safety</b>			
Parent groups	0.73	0.44	0-1
Social services agencies	0.70	0.46	0-1
Juvenile justice agencies	0.56	0.50	0-1
Law enforcement	0.85	0.36	0-1
Mental health organizations	0.59	0.49	0-1
Civic organizations	0.48	0.50	0-1
Private business	0.31	0.46	0-1
Religious organizations	0.25	0.43	0-1
<b>Dependent Variables</b>			
Drug-sniffing dogs	0.38	0.49	0-1
Metal detectors	0.09	0.28	0-1
Locked gates	0.40	0.49	0-1
Police officer	0.38	0.49	0-1
Surveillance cameras	0.55	0.50	0-1

**Table 2a. Logistic Regression Models Predicting Odds of Security Practices, Separately by School Level (Exp(B) reported)**

	Surveillance Cameras			SRO/Law Enforcement			Locked Gates	
	Elem.	Middle	High	Elem.	Middle	High	Elem.	Middle
Region:								
Midwest	0.774	0.861	1.464	0.357*	1.028	0.932	0.926	0.686
South	0.547*	0.728	1.479	0.580	2.204**	4.745***	1.109	1.217
West	0.218***	0.448***	1.055	0.308*	0.977	1.351	2.151**	1.090
Nontraditional school								
Students (ln)	1.350	0.837	0.511	1.026	0.955	1.807	1.375	0.979
Students (ln)	1.502*	1.409	2.397***	1.626	3.304***	2.732***	1.637*	1.623*
Location:								
Urban fringe	1.085	1.443	1.452	1.102	0.488***	0.758	0.842	0.709
Town	1.193	1.602	1.573	0.776	0.569	1.035	0.701	0.634
Rural	0.734	1.596	1.261	0.883	0.694	0.948	0.548*	0.566*
Parent involvement	0.779	0.890	1.021	2.035*	1.070	1.365*	1.186	1.093
Neighborhood Crime	1.301	0.974	1.221	0.762	0.885	1.291	1.057	1.170
Crime/Misbehavior:								
Disorder (ln)	0.806	1.359	0.687	0.595	1.079	0.946	1.294	1.395
Violence (ln)	0.944	1.038	1.111	0.929	1.089	1.006	1.070	1.126
Thefts (ln)	1.069	0.975	1.000	1.188	1.143	1.247*	0.770	0.995
Weapons (ln)	1.436	0.985	1.007	1.871*	0.840	1.446*	0.910	0.796
Alcohol/drugs (ln)	0.465	1.187	0.744*	0.532	1.134	1.096	1.570	1.112
Vandalisms (ln)	0.833	0.996	0.787*	0.744	0.924	1.063	1.025	0.797*
Threats (ln)	0.853	0.997	0.964	0.883	0.973	0.944	0.988	0.970
Avg daily attendance (ln)	1.181	0.663	0.931	1.607	0.471	0.979	1.174	2.693
%ESL (ln)	0.988	0.788**	0.934	1.266	1.099	1.024	1.085	1.203*
% Special education (ln)	1.030	1.309	1.075	1.628	1.034	1.030	0.989	0.741
% Low test scores (ln)	0.957	1.103	1.136	0.887	1.111	1.005	0.820*	1.085
Community groups' involvement in school safety:								
Parent groups	1.036	0.868	1.010	1.292	0.922	1.401	1.107	1.244
Social services	1.099	1.292	0.426**	0.489	0.901	1.035	1.920**	1.438
Juvenile justice	1.293	0.928	1.720*	2.435**	1.235	1.440	0.874	0.850
Law enforcement	1.304	1.474	0.853	2.585*	2.149*	1.596	1.340	1.368
Mental health	0.550*	0.595**	1.376	1.086	1.069	0.926	0.799	1.145
Civic organizations	1.324	0.628**	1.047	0.765	1.062	0.855	0.823	0.926
Private businesses	1.165	1.645**	0.768	0.936	1.010	1.016	1.640*	1.782**
Religious organizations	0.858	1.145	1.247	0.797	1.404	0.956	1.154	1.021
<b>% Racial/ethnic minority (ln)</b>	<b>1.089</b>	<b>1.213</b>	<b>1.060</b>	<b>0.944</b>	<b>1.189</b>	<b>1.158</b>	<b>0.906</b>	<b>1.050</b>
<b>% Free/reduced lunch (ln)</b>	<b>0.932</b>	<b>1.131</b>	<b>1.207</b>	<b>2.263**</b>	<b>1.388*</b>	<b>1.087</b>	<b>1.328*</b>	<b>1.327</b>
F	2.03***	2.09***	2.94***	2.28***	4.94***	6.64***	2.54***	3.41***

\* p<0.05, \*\*p<.01, \*\*\* p<0.001

**Table 2b. Logistic Regression Models Predicting Odds of Security Practices, Separately by School Level (Exp(B) reported), cont'd**

	Locked Gates	Metal Detectors			Drug-sniffing Dogs		
	High	Elem.	Middle	High	Elem.	Middle	High
<b>Region:</b>							
Midwest	1.046	571.9***	1.298	0.365*	4.142	3.120***	3.745***
South	2.715***	39.57*	1.614	1.385	0.103	5.171***	6.568***
West	1.727*	16.99*	1.547	0.346*	2.773	4.162***	4.559***
Nontraditional school	2.227*	0.218	1.694	0.887	0.365	0.707	0.407*
Students (ln)	1.533*	0.974	8.198***	1.497	1.433	1.415	1.741**
<b>Location:</b>							
Urban fringe	0.846	0.953	0.487*	0.361**	17.24*	1.379	1.624*
Town	0.498*	2.762	0.697	0.367	18.36*	1.897*	2.418*
Rural	0.537*	1.041	1.022	0.315*	140.9***	2.577***	2.271**
Parent involvement	1.293*	0.108**	0.589*	1.068	0.886	0.894	1.030
Neighborhood Crime	1.079	1.067	1.839**	1.803*	0.420	0.906	0.452***
<b>Crime/Misbehavior:</b>							
Disorder (ln)	0.933	11.98*	1.885**	1.635	0.303	0.886	0.926
Violence (ln)	0.953	1.231	0.940	0.859	0.733	0.876	0.797
Thefts (ln)	0.908	1.828	0.853	1.053	2.897*	1.125	0.938
Weapons (ln)	1.394**	2.664*	1.049	1.290	0.873	0.634***	0.947
Alcohol/drugs (ln)	0.925	4.311	0.900	1.117	2.954	1.449***	0.971
Vandalisms (ln)	1.085	2.348	1.030	1.231	0.290*	0.929	1.140
Threats (ln)	0.896	0.776	0.991	0.806	0.624	1.024	0.990
Avg daily attendance (ln)	1.074	1.573	1.425	1.696	1.611	136.5	1.029
%ESL (ln)	1.099	0.720	0.587***	0.654**	0.843	1.060	0.825*
% Special education (ln)	1.209	0.612	1.449	1.197	0.578	1.021	1.322
% Low test scores (ln)	0.963	0.911	0.946	1.167	1.038	0.916	0.907
<b>Community groups' involvement in school safety:</b>							
Parent groups	1.274	2.769	1.431	0.878	12.74*	0.998	1.147
Social services	0.776	0.731	0.797	0.836	0.182	0.829	0.608*
Juvenile justice	1.116	0.640	0.686	0.889	4.889	1.117	1.521
Law enforcement	1.000	0.361	0.949	1.831	1.037	1.528	1.816
Mental health	1.445	0.892	0.953	0.903	1.024	0.772	1.150
Civic organizations	1.307	0.211	1.181	1.546	2.348	0.746	0.813
Private businesses	0.701	6.146*	1.962	0.984	0.553	0.844	0.681
Religious organizations	1.415	0.665	1.171	1.076	1.285	1.683*	1.713**
<b>% Racial/ethnic minority (ln)</b>	<b>1.250</b>	<b>14.23***</b>	<b>2.207**</b>	<b>1.808**</b>	<b>1.507</b>	<b>0.864</b>	<b>0.718*</b>
<b>% Free/reduced lunch (ln)</b>	<b>1.070</b>	<b>0.364</b>	<b>2.272*</b>	<b>1.744</b>	<b>5.866**</b>	<b>1.378*</b>	<b>1.686***</b>
F	4.24***	3.57***	5.12***	5.23***	3.22***	4.26***	5.64***

\* p<0.05, \*\*p<.01, \*\*\* p<0.001

Figure 1. Estimated Probabilities of Elementary Schools Using Security Practices, by Category

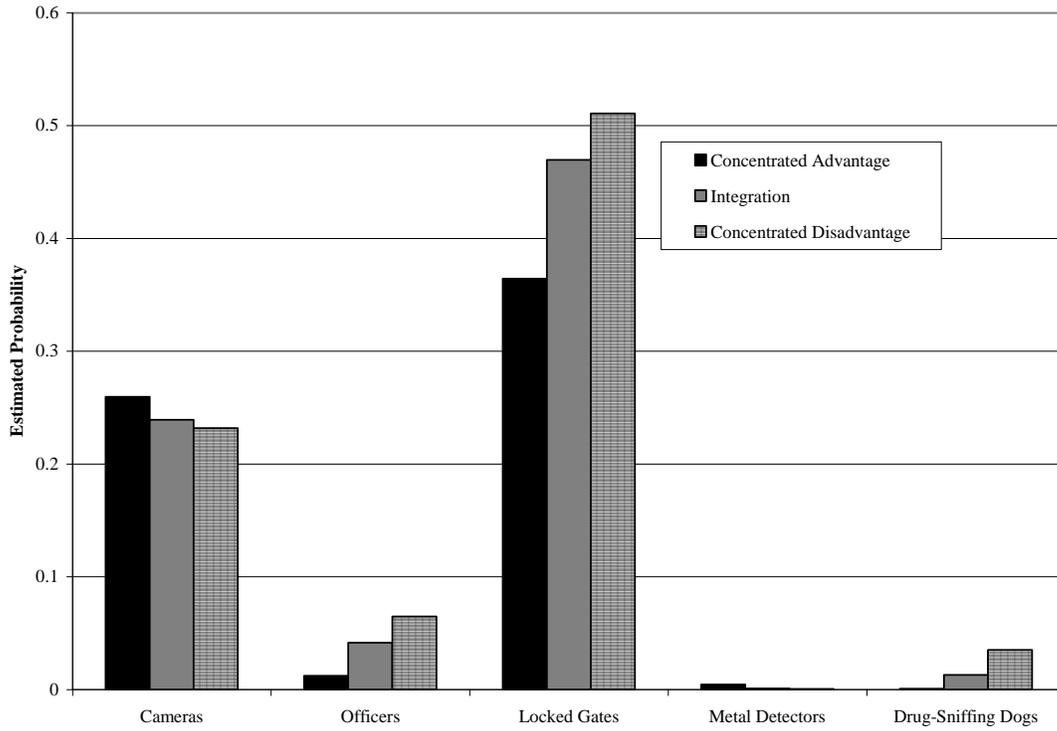
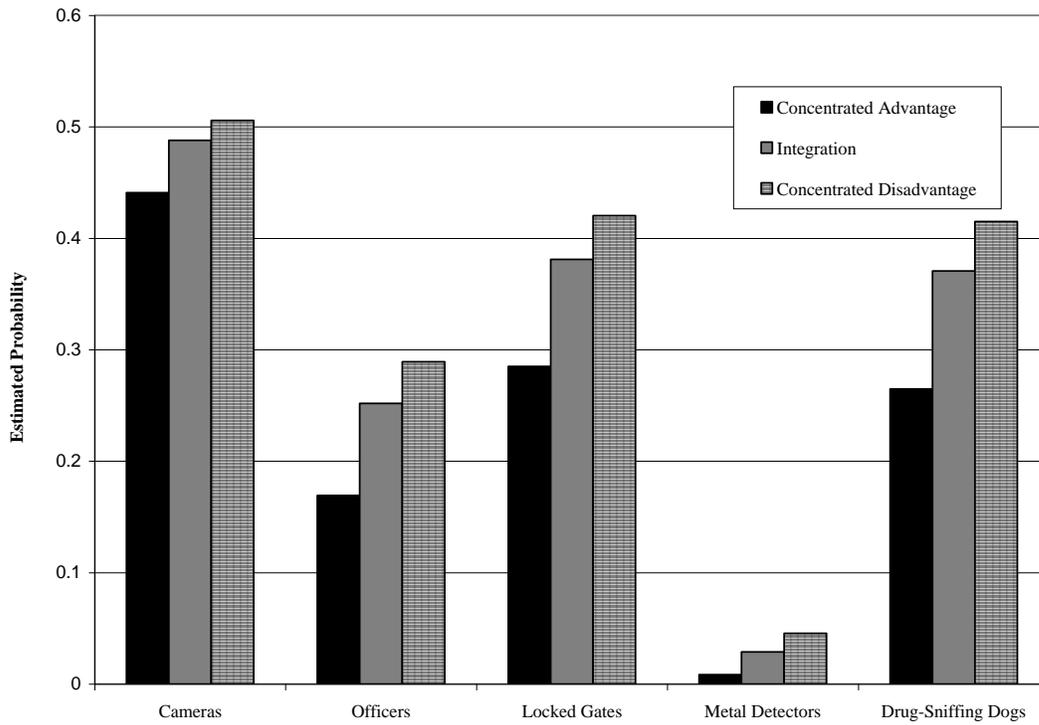
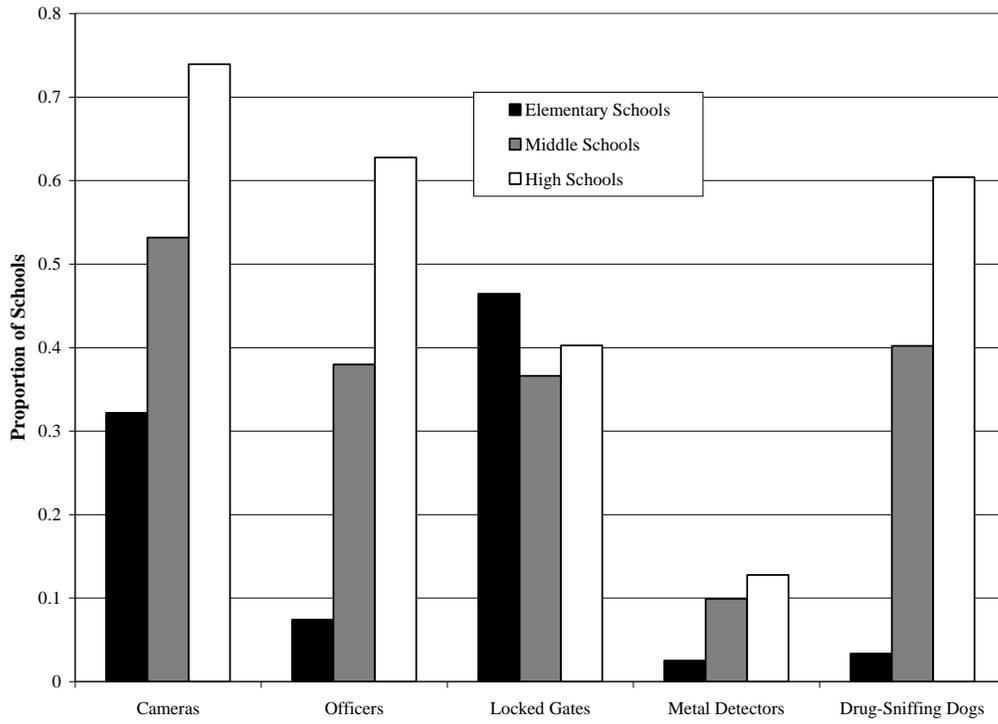


Figure 2. Estimated Probabilities of Middle Schools Using Security Practices, by Category of School



**Figure 3. Proportion of Schools at Each Grade Level With Security Policies**



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<sup>1</sup> Other scholars (e.g., Payne and Welch 2010; Welch and Payne 2010) instead use a racial threat perspective, which predicts that schools with large numbers of racial/ethnic minority students will respond to the perceived threat to white dominance these students pose with harsh discipline. The two perspectives are very similar and complementary; we use a social reproduction framework because it considers poverty as well as race, it better explains the seemingly natural way that school security and discipline take shape, and it offers a broader lens for understanding future effects of how schools socialize students into lasting social roles (see Kupchik 2010b).

<sup>2</sup> For example, since 2000 Congress has committed around 15 million dollars per year to the national “Secure Our Schools” (SOS) Act, an amendment to the Omnibus Crime Control and Safe Streets Act of 1968. The SOS Act is a voluntary, matching grant program where municipalities apply for federal funding for school safety grants, and currently administered under the COPS (community-oriented policing services) program. SOS grants can be used for metal detectors, locks, lighting, deterrent measures, security assessments, and security training; the federal government pays half of the cost of security measures, with state or local government providing the remaining portion (see U.S. Congress 2000; U.S. Dept. of Justice 2011). Similar funding has been provided through the Department of Justice, the Department of Education, and state governments (Lohman and Shephard 2006).

<sup>3</sup> Though public-use data are available for immediate downloading online, the restricted use data are necessary for our analysis because they include additional details about variables such as percent of student body that is nonwhite. These data are available pending an application process and require rigorous controls to protect against distribution of data that might identify particular schools.

<sup>4</sup> As required by the Institute of Education Statistics, all reports of sample sizes are rounded to the nearest 10 throughout this paper.

<sup>5</sup> The term “school resource officer” is used to describe police officers who are stationed in schools. SROs usually wear their full police uniforms and carry firearms, as do their counterparts outside of schools (see Kupchik and Bracy 2009).

<sup>6</sup> We realize this variable may not be completely accurate, if lower-income families do not know about the lunch program or refuse to apply for help with lunch purchases, or if other families misrepresent their income to receive

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reduced-price lunches. However, this is by far the best measure of socio-economic status included in the data, and it is consistent with prior research (e.g., Payne and Welch 2010; Welch and Payne 2010).

<sup>7</sup> Though we consider parental interaction twice – using an index of parental involvement in the school and a dummy variable indicating parent groups’ involvement in school safety – these variables are conceptually and methodologically distinct. The parental involvement scale is a scale computed from the mean of several variables measuring parents’ involvement in academic and social events, which we use as a proxy for political capital. In contrast, the variable indicating parent group involvement in school safety is dichotomous and limited only to whether parent groups participate in school safety efforts; we interpret this as a measure only of parental influence on school safety efforts, not an indicator of social status.

<sup>8</sup> We use the natural log of each continuous variable +1, in order to remove values of 0 (which are undefined when taking a logarithm).

<sup>9</sup> Collinearity diagnostics suggested that multicollinearity is not a problem in our models; the average VIF is 1.69, the highest value is 2.41.

<sup>10</sup> To consider whether the impact of parents in particular on school security depends on student demographics, in preliminary analyses we included interaction terms using our parental involvement scale \* percent minority and parental involvement\* percent receiving free/reduced lunch. These interaction terms did not improve the fit of our models and thus we did not retain them. On the potential for metal detectors to disrupt student learning see n. 11.

<sup>11</sup> A Department of Justice study of school security indicated that while metal detectors generally work well, “they are usually not effective when used on purses, book bags, or suitcases,” and the screening process is slow (National Institute of Justice 1999, cited in Lohman and Shephard 2006, 3). ACLU reports find that schools serving large numbers of racial/ethnic minorities are more likely to treat students like criminals, for example, subjecting them to regular searches and long line-ups at school entrances (while waiting to pass through metal detectors), also resulting in their loss of classroom educational time (for examples see Mukherjee 2007).