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Cops and Cameras

Public School Security as a Policy Response to Columbine

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After the shootings at Columbine High School, many public schools increased their visible security measures, such as use of security cameras and guards. This study assesses this policy response. Particular attention is given to the fear that prompted changes in school security, the types of visible security measures adopted by schools after Columbine, and the positive and negative consequences of these measures. Synthesizing the relevant literature highlights the lack of evaluative work regarding the effectiveness of school security and how little is known about the impact of security measures on students' civil liberty and privacy interests. Gaining a better understanding of school security can help officials make more informed decisions in response to rare, but highly publicized, violent crimes such as Columbine.

Keywords: *school violence; school security; public policy evaluation; student privacy interests*

The shootings at Columbine High School on April 20, 1999, stimulated a wide variety of reactions. This article examines one set of such responses: changes in security by public schools, specifically, increases in their use of visible security measures. "Visible security measures" include the presence of physical devices (such as metal detectors and security cameras) as well as trained personnel (such as law enforcement officers and private security guards) to prevent school violence. Although these measures are not the only tactic employed to prevent school violence after Columbine, they are the most common initial responses to the shootings.¹ To study this response, three main topics are examined: the fear that prompted changes in school security, the types of visible security measures adopted by schools after Columbine, and the positive and negative consequences of these measures. Synthesizing the literature from these related areas allows two goals to be accomplished. The first highlights the need for more evaluative work and assessments of both the effectiveness and the negative consequences of these security measures. The second explores the appropriateness of this policy response, which in turn can inform how best to respond to rare, but highly publicized, violent crimes, such as Columbine.

Author's Note: My thanks to Glenn Muschert and Jack Spencer for organizing this special issue as well as to the anonymous reviewers for their thoughtful comments on an earlier manuscript.

Before starting, two cautions are important to note. One is that this study examines school security as a reaction to Columbine and to a generic threat of violence. The assessment of these post-Columbine policy decisions does not speak to schools that struggle with significant localized violence and that make carefully crafted decisions to use particular security measures. A second caution concerns the extent to which reactions can be attributed to Columbine. Although the effect of Columbine is the focus of this review, this incident did not occur in isolation. Previous and subsequent events may have affected the use of school security. For example, the academic year before Columbine witnessed a series of five well-publicized school shootings in which 17 victims were killed (Lawrence, 2007). This atmosphere generated concerns at the time of a growing “epidemic” of deadly school violence (Muschert, 2007). The reaction to Columbine may not have been the same if this previous year of fatal school violence had not occurred. After Columbine, the September 11th terrorist attacks raised concerns about security across the nation, including fears that schools might be targeted (Casella, 2003a; see, generally, Altheide, 2009 [this issue]). In addition, other school shootings occurred, although until Virginia Tech in April 2007, none had been as deadly as Columbine. These events may have continued to promote increases in school security, which might not have been the case in their absence.

Fear of School Violence and the Security Response to Columbine

Before examining the security measures implemented after Columbine, it is useful to appreciate what prompted this change as such an understanding can help in assessing this policy response. The main factors that initially motivated schools to increase security were the media coverage of Columbine and the fear it generated among students and parents. As space considerations limit this review, readers interested in additional information about the media coverage of Columbine as well as fear of school violence are directed to Altheide’s (2009) article in this special issue.

The shootings at Columbine High School generated pervasive and graphic media coverage. News cameras filmed students dangling from windows and racing for safety, SWAT teams storming the school, and medical personnel treating bloody gunshot victims. These vivid and startling images were broadcast nationally as the incident unfolded and were recounted continuously in the days that followed. The national television networks devoted more air time to Columbine than to any previous school shooting (Mifflin, 1999). This coverage was amplified by 24-hr cable news channels as well as the Internet, which provided (at the time) a new source for on-demand access to information. Sixty-eight percent of Americans followed the coverage of Columbine “very closely” (Pew Research Center, 2007).²

As Columbine exemplified, the news media can expose millions of people to a criminal incident. Although criminologists have studied the effect of news coverage on fear, these studies tend to focus on local treatment of routine crime stories. Here a positive relationship is found between local news reporting and fear (e.g., Chiricos, Eschholz, & Gertz, 1997; Chiricos, Padgett, & Gertz, 2000). Little is known about the relationship between media coverage and fear with regard to rare, but extremely violent and deadly, events such as Columbine (Warr, 2000). Few studies have examined fear after Columbine (e.g., Addington, 2003; Stretesky & Hogan, 2001). Only one assessed the degree to which Columbine affected fear among a school-attending adolescent population (Addington, 2003). Addington (2003) used a quasiexperimental design to examine students' fear before and after Columbine. In her nationwide study of 12- to 18-year-old students, Addington found that fear at school did increase in the 2 months after Columbine. This increase, though, appeared to be small in terms of both affected population and magnitude. Fewer than 4% of students reported being more fearful after Columbine than before the incident, and most of these students experienced only slight increases in their amount of fear.

Students, though, were not the only ones affected by Columbine. Adults, especially parents of school-age children, also were frightened. Immediately after the Columbine shootings, 55% of parents reported fearing for their child's physical safety at school (Carroll, 2007). Parents' fear also appeared to be greater than that of their school-age children. One survey found that whereas half of the parents reported being fearful of school violence prior to the start of the 1999-2000 school year, only 18% reported that their children shared this concern about safety at school (Gillespie, 1999). This result is consistent with other findings concerning "altruistic fear," or fear for others. People tend to be more fearful for family members than for themselves, and parents fear most for their children as compared to other family members such as spouses (Warr & Ellison, 2000).

No research has examined changes in parental fear caused by Columbine (or any other act of school violence) that is comparable to Addington's (2003) quasiexperimental study of students. In absence of such work, insight can be provided by national poll data taken by Gallup during a several year period. These polls suggest that parents' fears did increase (Moore, 2003). In June 1998, 37% of parents feared for their child's safety at school. Immediately after Columbine in April 1999, 55% of parents reported being afraid for their child at school. This percentage appears to be the high-water mark as parental reports of fear in the 8 years since Columbine declined to 24% in August 2007 (Carroll, 2007). The 24% represents the "average" response for polls not taken immediately after a school shooting (Carroll, 2007) and can be viewed as a baseline level of fear for parents of school-age children.

Typically, people who are fearful of crime respond by trying to reduce their risk of experiencing victimization (see Warr, 2000, for a discussion). When individuals fear for themselves, they can restrict their own actions to reduce their risk such as

avoiding dangerous areas. A somewhat different array of responses is available when one's fear is for another person because individuals cannot exhibit the same control over the behavior of others. In their study of altruistic fear, Warr and Ellison (2000) found that fear for family members rather than personal fear caused respondents to employ home security devices. A similar response appeared to occur after Columbine in the form of parental demands for increases in school security. One year after Columbine, 57% of parents indicated that they had taken steps to find out about the security measures at their child's school ("Parents' Reaction," 2000). Principals also reported that parental complaints played a significant role in the security changes implemented after Columbine (Snell, Bailey, Carona, & Mebane, 2002). Since Columbine, almost 60% of principals reported making an effort to obtain parental input in school security efforts (U.S. Department of Education, 2007a). The initial response by schools to address these concerns about violence appeared to be tighter and more visible security (Crepeau-Hobson, Filaccio, & Gottfried, 2005). The steps taken by schools to improve security did not go unnoticed by parents. A year after Columbine, more than 70% of parents said that their school had taken steps to prevent school violence ("Parents' Reaction," 2000), and 37% reported that their child's school had upgraded security (Pew Research Center, 2000).

School Security Measures Employed After Columbine

To explore the security measures used by schools, this section addresses three topics: the types of security currently used by schools, the changes that occurred following Columbine, and an examination of why particular measures were selected by schools.

School Security Measures Currently Used in Public Schools

School security has evolved over time. Even before Columbine, schools used a variety of security measures; however, the original purpose focused on deterring property crimes and problems arising from graffiti and vandalism (Lawrence, 2007; National Institute of Education, 1978). In the 1980s, schools changed their focus to address school violence. The use of measures such as metal detectors and security guards, though, were limited mostly to "problematic" urban schools, such as those in Los Angeles, New York, and Chicago (Crews & Counts, 1997; Vera Institute of Justice, 1999). Since Columbine, use of school security to prevent school violence has expanded into suburban and rural schools and has changed to incorporate cutting-edge technologies.³ Table 1 provides examples of some of the more common visible security measures used by public schools. These examples are categorized by the general security concern each addresses, which include limiting access to the school building, limiting weapons on campus, increasing surveillance of students, and reacting to a violent incident such as Columbine. Because of space limitations,

Table 1
Examples of Visible Security Measures
Used by Public Schools After Columbine

Category of Security Measure	Examples
Limiting access to school building	<ul style="list-style-type: none"> Identification cards (students and/or staff) Locked school entrances during the day Gated campuses Visitor sign-in requirement Campus design changes
Limiting weapons on campus	<ul style="list-style-type: none"> Metal detectors (walk through, handheld wands) X-ray inspection of student bags and purses Clear-backpack policies Lockless student lockers Removal of student lockers Random sweeps for contraband
Increasing surveillance of students	<ul style="list-style-type: none"> Security cameras School resource officers (local law enforcement) Private security guards Staff training (drills, lock-down procedures)
Reacting to a crisis or violent incident	<ul style="list-style-type: none"> Student drills Duress alarms Telephones in classrooms

Source: Garcia (1999), U.S. Department of Education (2007b).

these measures are not described in detail. Interested readers are directed to sources such as Green (1999).

The security measures most frequently used by public schools seek to limit access to the school as well as monitor students at school, according to data collected from public school principals by the U.S. Department of Education (2007a, 2007b) during the 2003-2004 and 2005-2006 school years. With regard to limiting access, 85% of principals reported locking or monitoring doors to the school building during the day, and 48% required identification cards or badges for faculty (U.S. Department of Education, 2007b). To monitor students, 45% of the principals surveyed employed school security officers, and up to 43% reported using security cameras in their schools (U.S. Department of Education, 2007a, 2007b). These school security officers can include individuals employed by private security companies as well as local law enforcement officers.⁴ Efforts to limit weapons on campus are used less frequently. Fourteen percent of principals reported conducting random sweeps for contraband such as weapons and drugs, and 6% used random metal detector searches (U.S. Department of Education, 2007a).⁵

Beyond these more common measures, schools are investigating new technologies to provide security, which also focus on limiting access to school buildings and

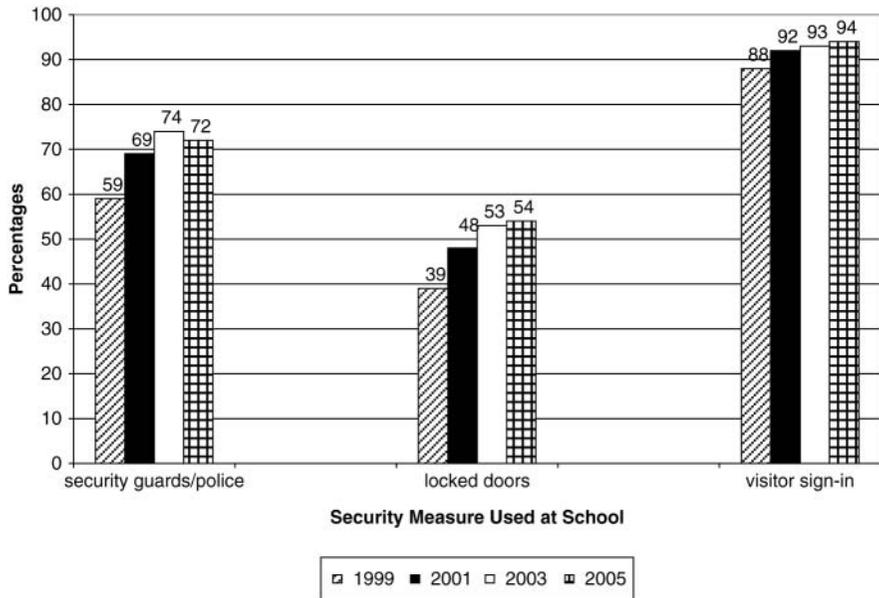
monitoring students. Three examples illustrate this trend. In one example, school administrators in New Jersey are experimenting with iris recognition software to limit access to schools (Cohn, 2006). In a second example, the school district in Biloxi, Mississippi, became the first in the United States to install Internet-based cameras, or Webcams (Braggs, 2004; Colgan, 2003). These Webcams are in each classroom and every hallway to minimize class disruptions and deter criminal activity (Braggs, 2004). In the final example, one California school is using radio frequency identification (RFID) tags on identification badges to track students for attendance purposes as well as to prevent vandalism in bathrooms (Leff, 2005). RFID tags are most commonly used by stores to prevent shoplifting and by owners to locate lost pets (EPIC, n.d.).

Use of Particular Security Measures After Columbine

Data from student surveys provides one available measure of the security employed by schools. In particular, changes in the use of school security over time across the nation can be observed from the School Crime Supplement (SCS) to the National Crime Victimization Survey. Since 1999, these questions have been asked every other year and collect data from a national sample of 12- to 18-year-old students. Questions include the use of various forms of security by the schools the students attend. Figures 1 and 2 illustrate changes in the six security measures collected since 1999.⁶ These measures include use of private security guards and/or law enforcement officers, staff monitoring of hallways, metal detectors, requirements of locking entrance doors, locker searches, and visitor sign-in requirements. Figure 1 illustrates three measures with the largest increases since 1999 (using security guards and police, locking entrances, and requiring visitors to sign in), and Figure 2 illustrates the three with little or no change (relying on staff supervision, using metal detectors, conducting locker checks). In addition to these six measures, additional security questions were added to the SCS after Columbine in response to anecdotal evidence that a growing number of schools had implemented these particular strategies. Beginning in 2001, data were collected for the use of student identification badges, security cameras, and codes of conduct. Figure 3 shows the marked increase in the use of security cameras since 2001.

A second source of security changes after Columbine comes from survey data collected from middle and high school administrators in Texas (Snell et al., 2002). This retrospective study sought to identify changes implemented during a 5-year period (1995 to 2000), which includes Columbine as well as the school shootings during the previous year. The more common measures parallel the nationwide data described above. More than 80% of the school administrators worked with law enforcement officers in some manner, and 46% of the full sample reported making this change recently. Half of the schools locked doors, and 34% of all respondents

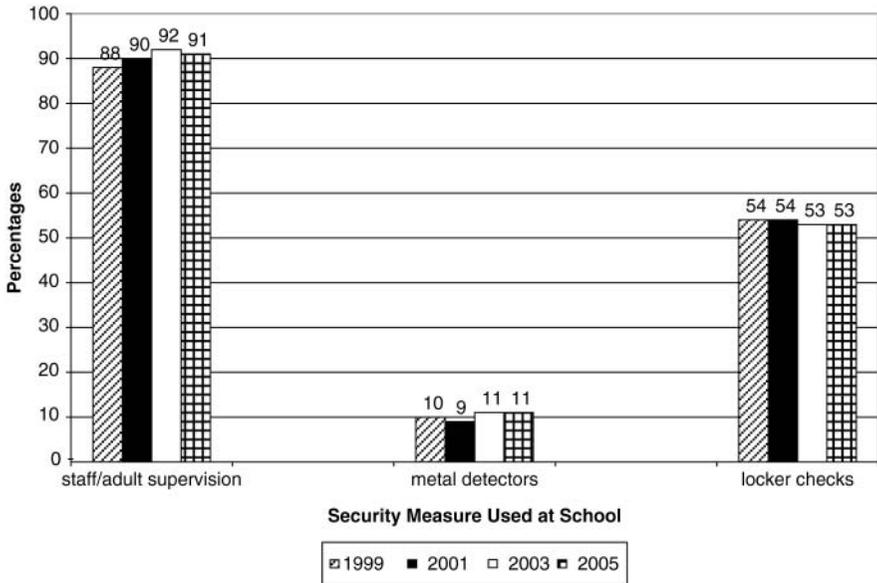
Figure 1
Percentage of Public School Students Reporting Use of Select
Security Measures, School Crime Supplement (1999, 2001, 2003, 2005)



started this policy during the 5-year time period. More than 30% of the administrators reported using video cameras, and 24% of all administrators made this change recently. Overall, 14% reported using metal detectors, and 8% of the full sample added them within the 5-year time period. In addition to capturing when the changes were made, the study explored why the administrators made the security changes. One of the most common reasons cited was highly publicized school shootings as opposed to other reasons, including local incidents. Other changes were strongly influenced by the publicized school shootings such as using metal detectors, requiring identification badges, and using security cameras.

In sum, information from students and principals provide a similar picture regarding changes in security after Columbine. Use of security guards and security cameras were among the most common increases reported, and these measures are also ones that concentrate on monitoring students. Others changes focused on limiting access to the school by such practices as locking doors, requiring visitors to sign in, and using identification badges.

Figure 2
Percentage of Public School Students Reporting Use of Select Security Measures, School Crime Supplement (1999, 2001, 2003, 2005)

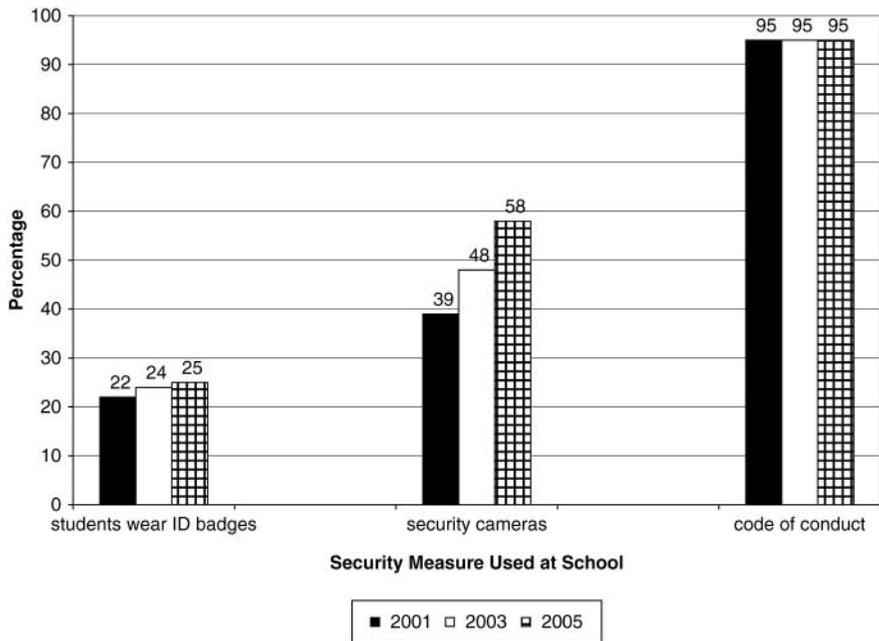


Why Were Security Officers and Cameras Such a Popular Response to Columbine?

In considering these changes in school security, an important question to explore is why measures such as security officers and cameras were selected. These specific choices are interesting especially in light of two factors. As is discussed in greater detail below, no clear evidence indicates that measures such as security cameras or guards are effective in preventing school violence. In addition, unlike other commonly used options such as locking entrances or requiring visitors to sign in, adding security cameras and guards incur significant financial costs. The previous section described pressure from concerned and fearful parents as an initial push on school administrators. In light of this pressure, government funding and corporate incentives made adopting particular measures—such as school resource officers (SROs) and cameras—an attractive response.

As with school administrators, politicians also heard demands for improved security from concerned parents, whom they saw as likely voters.⁷ The federal government has distributed hundreds of millions of dollars to bolster school security. One year after Columbine, then-President Clinton pledged \$60 million to enable schools to hire 452 law

Figure 3
Percentage of Public School Students Reporting Use of Select Security Measures, School Crime Supplement (2001, 2003, 2005)



enforcement officers as SROs (Juvonen, 2001). Overall, the U.S. Department of Justice has awarded \$747.5 million to fund and train SROs (COPS, 2004). In 2008, the U.S. Department of Justice announced \$13 million in grants to assist law enforcement with providing schools with security measures such as metal detectors and other deterrent measures as well as security training for staff (COPS, 2008).⁸ The U.S. Department of Education (2008) recently awarded more than \$74 million in grants, in part to help schools to prevent violence. States also provide funding to their school districts for security (Pagliocca & Nickerson, 2001). Other states have created a different incentive system. Arizona, for example, requires that schools employ SROs to qualify for certain state money (Pagliocca & Nickerson, 2001).

In addition to government funding, industry marketing and incentives generate strong motivation for schools to adopt visible security measures. School security is a lucrative business that markets a wide variety of school security products to schools (Casella, 2003a, 2003b). Companies realize that school administrators are under significant pressure to reassure parents, and sales pitches capitalize on this concern

(Peterson, Larson, & Skiba, 2001). The aggressive nature of such marketing has been criticized (Casella, 2003b; Peterson et al., 2001). Companies also provide incentives to schools by providing free services or merchandise in exchange for marketing (Casella, 2003a). In some cases, companies pay schools to test a new security technology, such as the program to equip student identification badges with RFID chips described above (Leff, 2005). Even professional associations for school administrators, such as the National School Boards Association, market security devices. The *American School Board Journal* has a "Marketplace" section, which provides "a selection of useful products and services." In the December 2007 issue, this section listed school security items that included photo identification systems, intrusion detection systems, and closed circuit television packages.⁹

Evaluations of School Security Measures

Although a primary goal for instituting security measures is to prevent school violence, little is known about the effectiveness of these measures as well as whether they generate unintended consequences. This section assesses this current understanding about school security.

Effectiveness of School Security

The fact that guards, cameras, and other security devices are so widely used but so little is known about their effectiveness has been the subject of concern (Greene, 2005; Pagliocca & Nickerson, 2001; Skirba & Peterson, 2000; see also Birkland & Lawrence, 2009 [this issue]). The lack of evaluative evidence is important to acknowledge because to the extent security measures are ineffective, they create a false sense of security (Lawrence, 2007, pp. 161-162) and a dangerous environment directly as well as indirectly by diverting money and resources from preventative measures that do work. Of the evaluations that exist, most measure effectiveness based on perceptions of school security rather than use of experimental designs or comparable forms of evaluative research.

The general perception of certain security measures is positive and suggests a belief that these measures work to prevent crime (see McDevitt & Panniello, 2005, for a summary). In particular, SROs receive high marks from students (Brown, 2005; McDevitt & Panniello, 2005) and principals (May, Fessel, & Means, 2004). In a study of three schools that recently hired SROs, McDevitt and Panniello (2005) found that students who had a positive view of their SRO also felt comfortable reporting crimes to the SRO and felt safe at school. In a separate study, principals in Kentucky believed that their SRO was most effective in reducing problems on campus, such as fights, drugs, and thefts; however, no evidence was available to substantiate this perception (May et al., 2004). For problems more directly related to

Columbine, the principals could not discern any effect; however, this response was attributed to the fact that in general few weapons were brought to campus. All of these studies provide only a partial assessment of SROs; they cannot fully inform regarding the effectiveness of SROs as no baseline measures were available to assess previous perceptions or actual changes in security.

Other measures, such as security cameras, received mixed reviews from studies that also rely on perceived effectiveness. A survey of school safety administrators found security cameras to be the most popular security measure among these officials and the one they believed the most effective at preventing crime on campus overall (Garcia, 2003). Again, no evidence was available to substantiate this belief. In contrast, Brown (2005) found students did not perceive any reduction in crime on campus and did not believe security cameras were effective.

Unintended Negative Consequences

Even if particular security measures are effective in preventing school violence, these benefits need to be balanced with their costs, of which financial considerations are only one. Two other relevant costs are the focus of this discussion: the consequences of security on the overall school environment and on student civil liberties. As with the effectiveness of school security, little is known about the extent to which these costs are incurred.

Commentators have speculated on the potential for security measures to create a negative school environment. For example, intrusive searches may foster student resentment (Hyman & Perone, 1998); and the use of metal detectors, officer patrols, and building lock-down drills can create a prison-like feeling (Noguera, 1995). Three studies provide initial support for these observations. In the studies, use of school security measures has been associated with higher reports of student victimization and fear (Schreck & Miller, 2003; Schreck, Miller & Gibson, 2003) as well as greater school disorder (measured as the presence of gangs, drugs, and crimes against students; Mayer & Leone, 1999). All three studies are limited. The primary problem is reliance on cross-sectional data, which makes drawing causal inferences difficult. In particular, no baseline measures are available to determine fear, victimization, or school disorder before the security measures were implemented. It is possible that even higher reports of fear, victimization, and disorder may have been found if no security were present.

Another consequence of school security is its potential to infringe on student civil liberties regarding suspicionless searches and privacy encroachments. Measures such as metal detectors and general sweeps for contraband involve suspicionless searches. The Fourth Amendment typically requires some level of suspicion before a search can be conducted by a state actor such as a police officer or school administrator.¹⁰ In limited situations where special needs are present, no level of individualized suspicion is required, and suspicionless searches are permitted. Courts have recognized that schools have a special need to ensure

student safety by preventing drug use. Since *Columbine*, the U.S. Supreme Court has expanded its approval of suspicionless searches at school by allowing urinalysis drug testing of students involved in any extracurricular activity (*Board of Education v. Earls*, 2002), not just athletics (*Vernonia School District 47J v. Acton*, 1995). Although the Court's opinion focused on the need to combat teen drug use, its emphasis on the importance for schools to provide a safe environment could easily be extended to security measures to prevent violence. The Supreme Court has not addressed suspicionless searches related to violence; however, using this reasoning such activities likely would be constitutional. Lower courts already have permitted the use of metal detectors, drug-sniffing dogs, and general locker searches in public schools (Addington, 1999).

The second concern for student civil liberties is the invasion of students' privacy at school. Although monitoring student behavior in public areas does not constitute a search for Fourth Amendment purposes, students' privacy rights are being compromised. Although students cannot expect absolute privacy at school, increasing infringement is occurring with regard to what privacy they do have. A particular concern arises because the security measures that are used most frequently (cameras and guards) invade privacy the most. The potential for even greater intrusions and monitoring is exemplified by the Webcam program that placed cameras in every classroom in the school district.¹¹ Privacy concerns also arise when security measures are expanded and used in ways not originally approved. For example, security cameras originally installed to prevent violence morph into ensuring that bathrooms are not vandalized. An open question is whether this expanded subsequent use would have been approved of initially, given the cost of this security measure (both in terms of financial and student privacy).¹²

Understanding the effect of security on students' civil liberties would be important if solely for the cost on individual rights; however, infringing on students' rights generates further consequences. One is the creation of a negative learning environment that arises when "all students are treated as if they were either sources or targets of potential danger" (Erikson, 2001, p. 119). Another consequence is the underlying message being sent to students that it is acceptable to view privacy interests and civil liberties as tokens that must be traded in exchange for security (Rosen, 2005; *Acton*, 1995, O'Connor dissenting).

Discussion

The preceding sections examined security as a response to *Columbine* by exploring the motivations for changes in school security, the security measures implemented, and the unclear effectiveness of these security measures. Summarizing this literature highlights three topics worthy of additional discussion. One concerns assessing school security as a policy response to *Columbine* and drawing lessons for more

effective strategies. Another topic is the need for evaluation studies to more carefully discern the effectiveness of various school security measures. A final topic involves the need to appreciate possible effects on student privacy interests so that any repercussions can be minimized.

Assessing School Security as a Policy Response to Columbine

To assess increased school security as a policy response, it is useful to examine the motivations behind this initial reaction and alternative strategies that could have been employed. Both issues relate to how officials can better respond to events like Columbine in the future.

Motivation for the policy change. One important motivation for increases in school security was parental fear that led to demands for safer schools and pressures on school administrators and politicians to provide more security to lower the risk of another Columbine occurring in their community. This motivation for policy change is problematic because the risk of experiencing such extreme events is greatly overestimated. People are notoriously poor judges for assessing their risk of rare, but highly publicized, events (Rosen, 2005). Vivid images from the coverage of these events are easily recalled and cause individuals to believe the event is likely to happen again and to overestimate their risk (Rosen, 2005). In addition, people tend to believe they are at higher risk for events of which they are most afraid (Rosen, 2005). This type of reaction appeared to occur after Columbine. Peterson and his colleagues (2001) noted that although the odds of a student's dying at school were 1 in 2 million, 71% of parents polled believed that a Columbine-type event was likely to occur in their community.

The problem with such parental assessments is that they led to demands for protections disproportionate to the actual risk posed. Exaggerated perceptions of risk result in policies that are "draconian and symbolic but often poorly designed laws and technologies of surveillance and exposure to eliminate the risks that are, by their nature, difficult to reduce" (Rosen, 2005, p. 17). Public officials respond in this way to be seen as "doing something" whether the policies are effective or not.¹³ Attention given to policies to make people "feel" safer takes the focus away from efforts that might actually be productive.¹⁴ This policy-making approach is in contrast to more comprehensive plans for responding to school violence. Such strategies recommend identifying the particular problem, pinpointing measures to address that problem, and engaging in subsequent evaluation to ensure that the problem has been ameliorated. Although they differ on what measures should be used to address the problem of school violence, security advocates as well as those proposing alternative violence prevention solutions recommend this general format (e.g., Mercy & Rosenberg, 1998; Trump, 2000; Vestermark, 1996).

Another problem with responses that cater to overestimated risk is that views about school violence and how to address it change with the passage of time. A year after Columbine, fewer parents supported increased security to prevent school violence than did immediately after the shootings, and more saw an important role for parents to play in helping troubled adolescents (Pew Research Center, 2000). Immediately after Columbine, expert panels sought to identify the sources of school violence and the best ways to address these issues. Within a year of Columbine, recommendations for preventing school violence began to be issued. Most did not advocate visible security measures as an effective response to deter school violence (Greene, 2005; Peterson et al., 2001). Even the commission charged with studying the Columbine shootings failed to recommend “‘target hardening’ security devices” as a general panacea to prevent school violence (Erikson, 2001, p. 117). Although views of how to deter violence may change, initial policy decisions to employ security tactics are often hard to rescind because of the investment in time and money and the belief that such measures work (e.g., Casella, 2003a).

Alternative strategies to prevent school violence. In the years since Columbine, alternatives to security devices in the form of violence prevention strategies have received increasing attention. These programs incorporate proactive ways to deter conflicts from escalating into violence through antibullying programs and conflict resolution classes, create more positive and inclusive school communities, and promote “telling” about potential dangers by generating open communication and a school atmosphere where everyone has a stake in safety and responsibility to maintain a secure school (Gagnon & Leone, 2001; Greene, 2005; Juvonen, 2001; Peterson et al., 2001).¹⁵ The most effective programs recognize that school violence issues arise from a complex set of problems and are not amenable to simple solutions (Peterson et al., 2001). Some alternative programs do incorporate aspects of visible security (e.g., Duke, 2002). One reason cited is that because alternative programs take time to work, visible security measures are needed in the interim to address current security risks (Green, 1999). In addition, some visible security programs such as those using SROs focus on alternative strategies, such as addressing underlying issues at school to prevent school violence in a proactive way (McDevitt & Panniello, 2005).

Overall, alternative programs are receiving more attention today for a couple reasons. One is the unknown effectiveness of school security measures as well as a backlash against more punitive policies such as zero tolerance (Erikson, 2001; Skirba & Peterson, 2000). In comparison, several alternative programs have been evaluated and recognized as effective strategies (Peterson et al., 2001). As these proactive programs are seen as successful, reactive responses, such as security devices that do not address the underlying causes of school violence, are seen as less desirable long-term solutions. A second reason is that the occurrence of another Columbine-type incident does not loom as large as it did a decade ago. Concern about more common dangers at school has replaced fatal school violence. Visible security

measures alone do not resolve issues such as bullying, fighting, and cyber-related threats. Several alternative programs work to address more frequently occurring problems, such as bullying, as a part of a strategy to prevent more serious forms of violence.

Need for Evaluation of Benefits and Costs of School Security

To implement effective policy, officials need to know what options work. A review of the existing literature emphasizes the need for evaluative studies of school security measures to determine whether these measures are truly effective. The few studies that have been conducted rely on perceptions as to whether security measures are effective. Such information provides initial insights but ultimately is not helpful. Programs such as Scared Straight and D.A.R.E. sounded incredibly promising and were proven to be ineffective (or even harmful) through evaluative studies (Gottfredson, 1997; Petrosino, Turpin-Petrosino, & Finckenauer, 2000). The dearth of evaluative work is surprising given the growing movement in criminal justice toward evidence-based policies. The lack of evaluations is also in stark contrast to other, more vetted school policies and programs implemented since Columbine, such as antibullying and antidelinquency programs.

Evaluations of school security are needed on two levels. Because security is employed to prevent incidents like Columbine, one level should evaluate security measures regarding their ability to prevent extreme acts of school violence. A significant problem with studying the effectiveness of security in deterring a Columbine-type attack is the difficulty in measuring success because such extreme acts of violence are so rare. The absence of an event cannot be attributed to a particular device. The second level should see if security measures are effective for other forms of violence more commonly faced by schools and students. Given the popularity of visible security, it is important to know how effective these measures are and in what circumstances they are best used. Having such knowledge would enable school administrators to make informed policy decisions.

As with effectiveness, assessments are needed to determine what negative consequences might result from employing particular school security measures. Previous researchers have suggested that heightened security measures may create increased victimization and disruption at school as well as increased fear among students. The extent to which these consequences occur and the reason why they occur are unclear and in need of additional inquiry. Other negative consequences have been suggested by anecdotal evidence but have yet to be examined.¹⁶ For example, heightened security might create an increase in the number of weapons at school if students perceive thwarting the security system as a way to challenge administrators. In addition, given the limited funds available for education, budgetary trade-offs likely occur in order to purchase security systems. It is unclear how much investment in security affects moneys available for educational programming, books, and staff. Additional work is needed to study these effects.

Need to Ascertain Effect of Increases in Security on Student Privacy Interests

Policies that diminish privacy rights are not uncommon following rare events involving extreme violence. In his critique of security responses to the September 11th attacks, Rosen (2005) finds that individuals agree to infringements on their civil liberties and privacy interests in exchange for a greater feeling of security, even if the privacy intrusion does not actually make them any safer. In the school context, however, an unfair bargain has been made. Parents and school administrators have not had to trade their own rights in exchange for security but rather those of the students. So parents are the ones who receive the feeling of security for their children, but students bear the cost of privacy invasions. In addition, the students did not report greatly increased levels of fear to generate this intrusion on their civil liberties.

This result raises a related question of who is protecting students' interests. The current answer seems to be almost no one because few people have both the incentive and the clout to affect policy. Students may have the incentive, but they lack the clout to change policy. Anecdotal evidence suggests that on occasion a parent objects to some form of security, but typically parents agree to increased school security measures, especially if they believe their children will be safer. School administrators are not likely to undertake such a role especially with parents demanding safer schools. In their study of drug search policies, Blankenau and Leeper (2003) provide some confirmation of this hypothesis, as few principals had qualms about whether such policies threatened student rights. Without any advocates for student interests, questions are not raised about whether a policy that legally *can* be implemented *should* be.

Students' rights are in a precarious position with increases in suspicionless searches and monitoring. In addition to the growing use of measures to monitor students, new technologies, such as Webcams and RFID tracking capabilities, appear to increase the level of intrusion. A better understanding is needed regarding the effect on students, both immediately in the school setting and in the long-term as participating citizens. In examining student rights, how school security policies are discussed also should be considered. Current policy decisions are framed as an "either-or" situation of respecting rights *or* having security. Other options, such as the alternative programs, suggest that solutions can respect both security and student rights.

Conclusion

The shootings at Columbine High School received enormous media coverage, which was closely followed by more than two-thirds of Americans. In the wake of this event, parents were more fearful for their children's safety and demanded that schools act to prevent such an incident from occurring at their local schools. School

administrators turned to visible security measures to demonstrate that they were “doing something.” Measures such as security cameras and SROs were appealing choices given financial support from the government and marketing efforts by companies. The outstanding question, however, concerns the effectiveness of these policy decisions. It is unclear whether these security measures work and to what extent they might generate negative consequences for students and schools.

This phenomenon is not unique to Columbine. Rosen (2005) has shown a similar set of responses to the September 11th attacks. To more effectively respond to events like Columbine, school administrators and public officials should have a better appreciation for public reactions to highly publicized acts of extreme violence, especially with regard to increased fear and risk assessment. In this situation, better communication may be needed to express convincingly that effective policies might not embody the most visible changes. In addition, officials need information about the actual costs and benefits of a policy so that informed decisions can be made. Although such incidents are rare, they do occur. School administrators and other public officials must be able to quickly respond in an appropriate manner and not misdirect scarce resources from effective remedies.

Notes

1. Readers interested in details about alternative policies are directed to Birkland and Lawrence (2009) in this special issue.

2. This percentage is markedly higher than for other school shootings. Following news about Jonesboro, which occurred the year before Columbine, was a distant second (49% followed very closely). Even the more recent Virginia Tech shootings did not garner as much interest (45% followed very closely) (Pew Research Center, 2007).

3. The definition of *violence* also has changed over time. Initial measures of school violence included physical assaults and robberies (National Institute of Education, 1978). Today the definition of *school violence* can include a much broader spectrum of behavior, ranging from lethal assaults to bullying and verbal threats.

4. A growing number of law enforcement officers are being assigned as “school resource officers” and receiving special training for deployment in a school setting (McDevitt & Panniello, 2005).

5. Metal detectors used by schools can include various formats such as walk-through machines and handheld wands. Handheld wands are the version most commonly used by schools (Garcia, 2003). Moreover, policies governing metal detectors vary from daily to random use. Random use is the most common (U.S. Department of Education, 2007b).

6. The author computed all School Crime Supplement (SCS) frequencies presented. The SCS data are publicly available from the National Archive of Criminal Justice Data.

7. Commentators have expressed particular concern that decisions regarding violence prevention are made on the basis of budgetary and political considerations rather than effective results (Crepeau-Hobson, Filaccio, & Gottfried, 2005).

8. The Iris Recognition Project in New Jersey noted above is an example of a \$293,000 grant from the U.S. Department of Justice’s National Institute of Justice (Cohn, 2006).

9. Schools are not the only customers for security companies. Companies also directly market to parents and focus on parents’ concern for school safety. One such product is the “bulletproof backpack.”

which is marketed for parents as protection that “costs less than an iPod” and provides “school safety at your fingertips” (Bullet Blocker, n.d.). The backpack is sold for \$175 and offers protection against bullets up to 9 mm and .44 Magnum in caliber.

10. School administrators searching students for contraband or rule violations, however, are subject to a lower standard of suspicion than is required for police searching a citizen on the street (*New Jersey v. TLO*, 1985; see Addington, 1999, for a discussion).

11. This practice raises a related concern about the privacy infringement on teachers (Braggs, 2004). Exploring this topic further is beyond the scope of this study.

12. This point is suggested by Rosen (2005), who provides a comprehensive discussion of this concern with regard to the use of security post-9/11.

13. As pointed out by one anonymous reviewer, concerns about liability and exposure to possible lawsuits if the school failed to act might have provided an additional motivation for the actions by school officials.

14. Interestingly, this reaction is consistent with how security proponents discern between the terms *safety* and *security*. Safety is “an acceptable level of risk,” whereas security is “the process of achieving acceptable levels of risk” (Vestermark, 1996, p. 108). Immediately after an incident like Columbine, however, the safety that parents want the security to provide is no risk of another violent attack. Although understandable from an emotional level, such an objective is impossible to achieve.

15. Anecdotal evidence suggests that these alternative strategies of community building and reporting problems may help prevent Columbine-type violence. Students have planned school shootings in the years since 1999. A number of these have been thwarted by another student who has reported the plan to a school official or law enforcement authority (Muschert & Larkin, 2008).

16. My thanks to an anonymous reviewer for suggesting these additional points.

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