

Examining School Violence: A Consideration of Select Future Avenues

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Dr. John Jarvis was chairman of the FWG from 2006 until 2016. The conference and most of the work on this working paper occurred under his leadership. While Dr. Jarvis bears no responsibility for any errors or omissions, he was instrumental in bringing about this document.

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A Word from the President

This white paper represents another offering in a continuing series of white papers authored by members and affiliates of PFI's Futures Working Group (FWG). The foundation for this white paper was laid when the FWG was co-sponsored by PFI and the Federal Bureau of Investigation. The FBI's support of FWG spanned 2003-2016 and that support allowed FWG to do valuable work. Although this white paper is not being co-published by the FBI, PFI gratefully acknowledges the FBI's support in this and many other work products written during more than a decade of strong collaboration.

These white papers are intended to spark ideas and incite creativity in responding to the future challenges and opportunities that policing and the criminal justice community must confront. As with most white papers, this is a working document. It is not intended to be the final word or definitive perspective concerning the topics discussed. Rather, these papers are designed to foster further discussion and consideration of possible, probable, and preferable future directions for policing. In this vein, the current paper offers a perspective on the critical issue of preventing and responding to school violence. We hope you find this, as well as past and subsequent FWG white papers, to be useful.

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Executive Summary

Efforts to prevent as well as respond more effectively to incidents of school violence have escalated in recent years. The challenges associated with confronting these events have become ever clearer in the aftermath of mass casualty incidents such as those in Aztec, New Mexico (2017), Benton, Kentucky (2018), and Parkland, Florida (2018). The fundamental causes of school shootings of this nature continue to be a subject of much debate. Because causes have proven idiosyncratic or elusive, this white paper instead seeks to describe the specific nature of these events and identify possible paths for prevention that are relevant for school environments. However, school shootings are just one category of mass casualty events. Other subsets of mass casualty events include, but are not limited to, incidents of workplace violence (FBI, 2002) and mass shootings occurring in public places such as malls, movie, theaters, and places of worship. One commonality in many of these events is shooting incidents occurring in the presence of many potential victims. The school setting shares this characteristic, but traditionally has been viewed as a safe environment for children. Nonetheless, mass casualty events have occurred in various schools from kindergartens to institutions of higher learning. As such, this paper highlights some of the recent identified strategies that are thought to contribute to better preventing and responding to the threat of a mass casualty event in a school setting.

An analysis of the possible, probable, and preferable outcomes and the delineation of any obstacles that may be incurred in pursuing strategies to achieve the intended results (namely, neutralizing the threat and/or effect of a mass casualty school

shooting) are not detailed in this effort. Other publications pursue this line of inquiry and provide options for individual school districts, police, and other public safety officials to evaluate and determine the avenues of prevention that are most relevant and viable.

Examining School Violence:

A Consideration of Select Future Avenues

Framework of the White Paper

The future of school violence is the focal point of four intertwined developments: the broader range of potential violent threats for which schools must prepare; the nature of changes within the educational communities; the evolving forms and instrumentalities of violence; and the intersection of emerging technologies with each. General prevention, detection, intervention, and emergency response planning all stem from a realistic view of the possibilities arising in the future. Some discussions highlight vulnerabilities in current planning and response endeavors, so this effort addresses contemporary needs as well as future ones.

This White Paper is the result of several lines of inquiry that grew from an FWG conference in 2009, including but not limited to, social and political shifts since that meeting concluded. For example, some of these shifts are noted below:

- the nature of 'school';
- the types of violence occurring in schools, or at school activities;
- the reach of school responsibilities;
- the balance of benefits and liabilities of reigning safety models;
- the emergence of a political push to arm teachers and to allow at least college-age students to carry concealed weapons on campuses;
- the implications of changes in the educational establishment itself.

In the wake of the Sandy Hook Elementary School shooting in December of 2012, the search for answers has expanded the discussion from the role of firearms to the contributing factors of mental illness, violent video games, and poor parenting. Finding solutions in this regard is made difficult by a focus on the very small number of instances where possible contributing factors converged with fatal results, to the exclusion of an examination of the much broader number of instances – whether firearms ownership, victimization by bullies, mental illness, or others – where the same factors are present without producing fatal violence.

Introduction

The April 20, 1999, massacre at Columbine High School has become the benchmark event for consideration of school violence. The fundamental elements of ‘jocks’ and ‘losers’ (in the media accounts, the Trench Coat Mafia), disaffected students seeking revenge for bullying and other slights, and the subsequent discovery of the evidence of elaborate preparations helped coin the term ‘targeted violence’. The actions of the killers were compounded by ongoing social media accounts from within the school, and the scenes of students being led from the school, hands on their heads, because it was not known that the killers were already dead.

Both police and school tactics changed as a result of this tragedy. Using Columbine as a template, schools and police have created emergency response plans for responding to unexpected school violence, including early intervention techniques (see Studer and Salter, 2010) and tactical police responses to an active shooter incident,

during which the school remains in lockdown. A national effort to reduce school bullying and establish an ability to do threat assessment was undertaken as a joint effort between the U.S. Department of Education and the Secret Service (Vossekul, Fein, Reddy, Borum, and Modzeleski, 2002). Lockdown procedures were refined and practiced in schools across the nation as the first line of defense against an armed intruder. An industry of security consultants and vendors selling lockdown equipment arose to meet market demand.

The April 16, 2007, shooting rampage at Virginia Tech established a similar grim standard for institutions of higher education. Although other shooting murders at Northern Illinois University (2008) and the University of Alabama (2010) made national headlines, the 32 innocents killed at Virginia Tech (2007) made it the worst shooting of its kind in modern American history. It shared a distinctive set of circumstances that were revealed in the wake of the incident and mirrored that of Columbine: the victims and perpetrator were enrolled in the institution; alienation on the part of the perpetrator; social media-mounted expressions of anger; preparation and intent; and warning signs within the institutional context that were minimized or (in retrospect) alleged to have been improperly handled (e.g., Virginia Tech Review Panel, 2007).

These commonalities have created an emphasis on threat assessment: early identification and evaluation of potential threats, leading to appropriate interventions to thwart violence. The emphasis is on prevention. The Secret Service has a long history of doing such assessments for public figures and was involved in the early school efforts (Vossekul et al., 2002). The FBI joined the effort in the wake of the Virginia Tech attacks,

adding its experience investigating large-scale events in other environments (Drysdale, et al., 2010). Other efforts at addressing the problem include the work of the Office of Drug-Free Schools (USDOE, 2010), the Department of Homeland Security (DHS, 2008), the Centers for Disease Control and Prevention (2017), and many others.

The December 2012 tragedy at Sandy Hook Elementary School brought to the nation another sight of distraught students being led away from their school, the site of multiple murders. Even though schools are by far the safest location for children outside the home, the high-profile shooting incidents at Columbine, and schools in Jonesboro, Arkansas; West Paducah, Kentucky; Red Lake, Minnesota; Bethel, Alaska; Pearl, Mississippi; Chardon, Ohio, and too many others, have forced school violence into the public debate.

The public perspective of school violence is defined by targeted violence such as the Columbine and Virginia Tech shootings, now referred to as *targeted violence* in schools (see O'Toole, n.d.; Vossekuil et al., 2002). Those incidents are rare, but have catastrophic consequences; they are newsworthy because they represent an extreme form of *unexpected violence*: students killing other students.

Other forms of school violence, such as gang confrontations, inter-school rivalries, and the like receive less attention (unless they result in fatalities) as they fall into a conceptual category of *expected violence*. Perhaps the most prevalent form of school violence is bullying, a low-level but persistent form of expected violence that is trivialized by some and dismissed as 'just part of growing up' by others, with little regard for the actual impact on the lives of the bullied (see Patchin & Hinduja, 2010). That

attitude has changed in the wake of Columbine, which brought the link between expected and unexpected violence into sharper focus.

Many of the national incidents subject to extensive coverage and consideration grew from the slights and injuries of the lowest form of violence, bullying. Schools have responded with a wide range of preventive measures (Ttofi and Farrington, 2012).

Unfortunately, the careful review of Ttofi and Farrington showed that “more research is clearly needed” before particular methodologies and strategies are to be chosen.

The Futures Working Group recognizes the admirable work done by colleagues in the area of preventing targeted violence (e.g., Cornell et al., 2009; O’Toole, 2000), but is concerned that the underlying assumptions are too narrow. As a consequence, an underestimate of the potential range of violence that may be endangering school populations may be occurring. Therefore, this white paper explores the wider range of possibilities and the need for more extensive and nuanced preparations than the targeted-violence/lockdown model provides. This includes: examining variations of school types; extensions of the definition of school by time and function (in essence a shift in the concept of the schoolhouse); the impact upon the schools of external issues; additional types of violent intrusions; new variations on the general themes, noticeably the emergence of cyberbullying; and, the larger impact of developments in economics, the rapid mutation of technologies, social networking, and changing demographics.

Background

School violence is defined in the public imagination by the high profile, multiple-casualty events noted above. They represent the occurrence of fatal unexpected violence in places believed to be sheltered and safe, if not idyllic (see Ferguson, Coulson, and Barnett, 2011 for further discussion of expected and unexpected violence). The school itself is an iconic fixture in the American psyche, and the locations of the mass shootings are generally suburban and rural, far from the urban settings where violence may sometimes be expected due to the prevalence of general violent crime in urban areas. Events on the level of Columbine and Sandy Hook are truly shocking and tragic, but they also relatively rare, given that in the U.S. we have approximately 120,000 schools (National Center for Education Statistics, n.d.). Mass shootings stand out for the level of violence, as well as for the ages of the perpetrators and victims.

The realities of school-related violence are far more complex. For instance, the monolithic media term 'school violence' is defined by subtle, often unarticulated terms frequently commingled with mass killings, with the only criterion being the number of casualties. The minimum number of dead in any mass killing needed to make national headlines is currently being identified as three,¹ though other circumstances may

¹ This reflects a recent change via Public Law 112-265 signed into law January 14, 2013 amending Title 28, USC 530C (b)(1) to define mass killing as 3 or more killings in a single incident.

² Many institutions have different grades of lockdown, often corresponding to the color-coding used by the Department of Homeland Security. Full lockdown – which is the point of reference in the main text – is applied only for intruders or direct threat: classrooms locked and darkened to give the impression of being empty, students in a low or concealed position, cell phones off and no conversation. Moderate lockdown may be initiated when there is potentially dangerous police activity in the nearby area, but no direct threat: outer doors are locked, and no one is allowed in or out, but normal

intercede to shift an incident in to, or out of, national prominence. Many school-related shootings that do not meet this threshold receive little or no media treatment beyond local coverage. It takes a variation of the media's 'man bites dog' canard, such as a YouTube posting of a cell-phone video of a shooting or beating at a school bus stop (Associated Press, 2012c) to put a single casualty event on the national news.

How many school shootings are there? As with other variables in this discussion, the more one learns the more complicated the answer. Fattal (2018) considers the many complexities associated with the strict classification and enumeration of what should be included in school shooting events. While the popular imagination associates the term with a shooting of, or at, a person who is part of the school community, other possibilities are included in some reports. Whether a suicide on school property (by an individual not considered a member of the school) should be considered a 'school shooting' is a matter of some dispute. On the other hand, an accidental discharge of a weapon on school grounds during school hours is another matter; such events, while unintentional and not motivated by malevolence or malice, still have the potential to injure students and staff.

The definition of 'school' is equally elastic, oftentimes including disparate incidents under a single, iconic heading. 'School-related' violence is far more common than the national profile events, and far more ordinary. It takes place in locations far from the school itself, as discussed later in this paper. The range of potential types of violence is broad, echoing a question asked by Erik Shafer (quoted in AP 2012b): "How

do you prepare yourself for an infinite way that people can be shot and killed? ” Our focus is institutional, not individual, which renders the basic question even more vexing.

The Futures Working Group solicited input from specialists in several related fields: School Resource Officers (SROs), the National Association of School Safety and Law Enforcement Officials (NASSLEO), academics working in the field of school safety, law enforcement officials, and other individuals with practical knowledge in the area. These experts originally met in Richmond, Virginia, in March 2009 to consider two primary questions:

- (1) What do we need to do now to better respond to the threat of school violence?
- (2) What changes in educational delivery techniques, social dynamics, demographics, economics, or other external forces will create new permutations of school violence?

Since that time, additional incidents have added to the debate along with non-school shooting incidents. For example, the offender who shot Arizona Representative Gabrielle Gifford and several other victims was a community college student whose conduct had raised questions about his mental stability at that school; his circumstances echoed eerie overtones of the 2007 Virginia Tech shooting. In both of those incidents, mental illness was thought to be a contributing factor. Mental illness was frequently discussed in the post-Newtown coverage and debate (CNN, 2014) and has been prominent in the early coverage of the Parkland, Florida, incident (Finn, 2018). As such, school violence and mass killings more generally often draw a larger national debate

about treatment of mental illness. This points to other potentially exacerbating realities: movements to deinstitutionalize the mentally ill; the prevalence of homeless persons who are mentally ill; the number of prisoners who are mentally ill; and the proliferation of diagnoses of Post-Traumatic Stress Disorder and traumatic brain injury among veterans returning from combat theaters.

While mental illness certainly is a commonly attributed cause, we do not lack for others. For example, Pah tied a rise in school shootings to economic insecurity (Pah et al., 2017). That finding is preliminary and awaits replication, and may reflect correlation rather than causation. Nevertheless, it serves as a caution that seemingly unrelated external conditions beyond the reach of preventive measures may have influence. To some degree, a singular focus on school shootings runs the risk of being too narrow a focus. While a superficial reading of past events supports the notion that schools are prime targets of criminal or deranged actors, mass shootings have occurred in other venues such as theaters and nightclubs, and open spaces such as shopping malls and outdoor entertainment venues.

In many of the high-profile incidents, school violence is preceded by violence against family members: Salem, Oregon; Newtown, Connecticut; Bethel, Alaska; Pearl, Mississippi, and other cases began with the murder of parents. Some shooters have a documented history of abuse. While the focus must be placed on the school environment out of necessity, we must not lose sight of the fact that many non-school factors have played a role in these events. The probative information that might help make more sense of otherwise senseless tragedy often dies with the assailant, either by

suicide (as in Newtown and Virginia Tech) or through police action. Sometimes assailants leave a visible trail in social media or other formats on their computers or in the wild (as did Caleb Sharpe at Freeman High School and Nikolas Cruz, currently accused of the Parkland, FL, killings); in other cases, their attacks have little or no supportive foundation, or they obliterate their trail (as Adam Lanza did in Newtown). This complicates understanding the exact goals, motivations, and pathologies affecting the offenders.

Types of School

There are two main divisions of 'school', as a backdrop to this discussion. In the U.S., school attendance is required of nearly all students under the age of 16, 17, or 18 (depending upon their state of residence). College attendance is not required: it is voluntary, a route to self-improvement and a higher standard of living.

Primary schools vary considerably, from public schools to parochial schools to home schooling and internet-based schooling, all under state guidelines. No longer is attendance at the neighborhood school a given for a child: vouchers allow parents to send their offspring to faith-based, charter, or other institutions. Magnet schools that attract high-achieving students interested in a particular curriculum have been a feature of the American educational landscape for decades. The movement to use public funds to support private schools goes back to approximately 1877; vouchers to help students move from 'failing' schools to more effective ones is a more recent development, dating to around 1989 (National Conference of State Legislatures, n.d.).

College is not monolithic. Large and medium-sized state universities frequently differ from smaller private institutions that offer smaller classes and focused teaching specialties. So-called 'elite' universities of both stripes promote academics through high-level research and often sponsor distance learning through a variety of mechanisms. For students seeking the most economical college education, those with vocational aspirations, or who need greater preparation for the rigors of academics at four-year schools, community colleges offer training programs, certificates, and two-year degrees that allow the option of transfer to baccalaureate institutions.

Permutations of institutional missions pale beside the variations in schools' physical plants. Depending upon the era in which they were constructed, primary schools may be compact buildings of two and three stories with an entrance well above ground level; single-story facilities with two or three wings reaching out in different directions, framing playgrounds and playing fields; or physically separate buildings spread across a campus. The differences have considerable impact on plans for school defense plans and evacuation drills. Depending on trends in the number of school-age children in a jurisdiction, schools may have satellite classrooms in trailers on the grounds. These constitute a temporary, though relatively low-cost, capital investment that meets fluctuating demands for space and facilities. When in use, they require transit to and from the main building, creating yet another vulnerability.

Colleges and many private preparatory schools tend to be multi-building campuses, though exceptions exist (including storefront colleges in downtown business areas or strip malls). Dormitories and other residential facilities can exist for colleges,

universities, and boarding schools. The residential spaces mean that protection is a 24-hour-a-day responsibility of the institution. While the profile of active school shooters to date has been one of limited building-to-building mobility (the Virginia Tech incident involved two spatially separated sites), safety planning must encompass a range of possibilities.

The Reach of School Responsibilities

To most Americans, 'school' is a building and its associated grounds and playing fields. The high-profile events of Columbine, Newtown, Jonesboro, and elsewhere took place on or within the grounds of the school itself. However, K-12 schools are responsible for their students' safety almost from door to door. School activities include bus transportation to and from school; field trips to parks or places of interest; after-school activities; sports events on school grounds and away; social events, dances, performances, and commencements, all occurring on or off grounds; trips to sponsored academic competitions and to visit colleges; and myriad other sponsored and supported activities. Each of these poses some security risk. Many school districts now have video cameras that provide evidence of bullying and other offenses on buses. Local police officers work off-duty details at sporting events to dampen the possibility of inter-school conflicts.

The rapid proliferation of social media poses many new challenges for schools, including academic cheating and cyberbullying. Several states have enacted or proposed laws making schools responsible for dealing with cyberbullying (for instance, New Jersey

in 2009; Massachusetts in 2010; and Connecticut in 2011 [Cuda, 2011]) even when it occurs off school property and after school hours, if it

substantially disrupt[s] or interfere[s] with the orderly operation of the school or the rights of other students... [or creates] a hostile educational environment for the student by interfering with a student's education or by severely or pervasively causing physical or emotional harm to the student. (Assembly Education Committee, 2010)

Social media are not limited by physical barriers, and are asynchronous: harassment by texting, instant messaging, Facebook posts or defacement, or any of the myriad other manifestations of cyberspace communications can affect a child's school performance. Unlike the more familiar school bullying, however, no adult is likely to observe it during the school day. Teachers sensitive to their students' affect may suspect it, but many children choose not to tell adults when they are targets of bullying or worse. In cases where school officials are aware of untoward activity by pupils off school grounds, their ability to take any meaningful action can be circumscribed by the courts (Associated Press, 2011b).

Types of School Violence

The post-Columbine literature on preventing targeted violence is based on the fact pattern of Columbine, and emphasizes the prevention of bullying. That model assumes that the attacker will be a student, seeking to avenge real or perceived wrongs. However, schools are vulnerable to attack from other sources (Drysdale, Modzeleski, and Simons, 2010). School planning must anticipate and prepare for a wide range of threats. Some of them target the school population, while others target only specific

individuals within the school. It is a fairly wide range of possibilities, each of them only a remote probability for any individual school, but each must be incorporated into planning exercises. The basic list (allowing for permutations) includes the following:

-- *targeted violence by students* or former students, on the Columbine model; several variations of this model exist, including (but not limited to) students perceived as abusers (Columbine), students who are mentally ill (CNN, 1998); or revenge against teachers or administrators (Associated Press, 2011c);

-- *targeted violence by parents* or caregivers, in response to, or as revenge for, perceived wrongs; the most prominent case in recent years was a grieving father's reaction to what he perceived as unfair discipline that drove his son to suicide (Miles, 2012; Associated Press 2011d);

-- *rampage violence* by an individual with no connection to the school, but nursing grudges or acting out violent fantasies of his or her own: this model may fit the Newtown shooting in December 2012 and the Rancho Tehama shootings in November 2017, as well as a number of the knifing attacks on schools and day care centers in Japan and China (Associated Press, 2012a);

-- *domestic targeted violence*, in which the spouse, lover, or rejected suitor of a school staff member attempts revenge in the school environment;

-- *workplace violence*, in which both victim and assailant are adults, working in the school; dismissals (see Alvarez, 2012) and denial of tenure (as in the Amy Bishop case at the University of Alabama [see Wheaton & Dewan, 2010]) are common sources of such episodes;

-- *custody disputes*, in which a student at the school is the target of a potential parental abduction. This situation most likely would not begin as a violent episode, but would have the potential to turn violent quickly if the non-custodial parent's or guardian's desires were thwarted;

-- *incidental external violence*, in which violence occurring outside the school moves in such a fashion to threaten the school or its students (Associated Press, 2012h);

-- *intrusion of external police activity*, most often a police pursuit where the subject being pursued enters school grounds or facilities, either as an escape route or with an intent to take hostages to avoid apprehension;

and,

-- *accidental violence*, most often associated with the discharge of a firearm brought to school by a pupil, such as the November 2012 shooting death on a bus in Homestead, Florida (Associated Press, 2012g), and the accidental classroom shooting in Bremerton, Washington (Associated Press, 2012k).

In addition to the above, there have been incidents arising from the carrying of weapons for self-defense (Dobner, 2012), and unclear situations like the fatal police

shooting of a student with a replica firearm in Brownsville, Texas (Associated Press 2012m). An important distinction crosses these categories: whether the intruder/shooter is a stranger or a member of the school community (student, teacher, staff member, parent or volunteer) who presumably is familiar with the school's countermeasures. Since many of the targeted violence cases on record entail evidence of preparation, the insider threat poses a greater danger than the outsider-intruder.

Somewhat more problematic, and to date not classified as school violence on a par with targeted violence or intrusion, is corporal punishment, hazing, or worse, such as the 'tasting game' in Miramonte, California (Associated Press, 2012d; Lovett and Nagourney, 2012) inflicted on students by teachers or staff. Those incidents are usually treated as child abuse or assault, and handled through criminal and civil venues (Associated Press 2011b, 2012d).

The list above is not exhaustive, however; there are other threats for which responses must be anticipated and planned, to the degree possible. Some have yet to materialize (on American soil, at least), but others have had harbingers or close calls that suggest they are viable possibilities. Coordinated attacks, the use of explosives (e.g., Ayden-Grifton High School, 1971, and attempted in Columbine), and alternative forms of attack on the scale of Beslan or Mexican cartel violence are among the foreseeable types of incidents that could target school or college facilities, as well as other venues.

Ideological Coordinated Attacks. In the ordinary understanding of targeted violence, which students or former students perpetrate, coordinated attacks are

relatively rare. The Columbine attack involved two students working in concert, but was otherwise little different from single-shooter attacks. The Jonesboro (AR) attack (1998) was among the earlier attempts to use alarms to herd victims into subsequent lines of fire.

By far the most horrible example of ideological targeting occurred in September of 2004: the siege at School No. 1 in Beslan in the North Ossetia region of Russia. Chechen separatists killed 186 students (who had been held hostage for three days under miserable conditions) when Russian special forces attempted to end the ordeal (see Pop, 2017). No political conditions in the United States come close to the Caucasus region's factionalism, but other elements could mount a similar operation.

The cartel violence south of the US-Mexico border has been vicious enough to include a Beslan-style attack, but has not yet done so. Though cartel penetration in the U.S. is fairly extensive, there is as yet no visible territorial conflict that would suggest a school takeover or massacre as a retaliatory tactic. However, as a demonstration of capacity intended to support efforts to corrupt American politicians, or as a punitive measure when such attempts were rebuffed, cartel violence directed toward schools remains an outside possibility.

Though the nation has not yet seen so extreme a manifestation of local gang violence, school dances are often the scenes of gang fights. More established gangs work within established sets of rules, but gangs trying to carve out turf, raise their prestige, or redress grievances might take the demented view that a school takeover

could establish their credibility within a gang or increase their stock in the hierarchy of the gang.

More likely, perhaps, is an attack by radicalized religious zealots. In the post-9/11 era, that term has been grafted to Islamic militants (both for terrorist attacks in the US, the UK, and continental Europe and for the anti-schooling tactics of the Taliban, el Shabaab, and other al Qaeda-like groups). It is equally possible, however, that splinter groups of the Aryan Nation/Christian Identity white power factions could target inner-city schools, or those in areas with a large Muslim population. Similarly, isolated militia groups or Jewish Defense League-inspired radical groups might target Muslim schools as a political platform or for ideologically rationalized revenge for acts in the Middle East.

Other remote possibilities for coordinated attacks against schools (or against school populations away from the campus, such as on buses [for examples of approximations, see Ransom, 2017 and WTVR, 2017] or at functions in other locations) include a feint to draw police away from a larger, more important criminal act; the reverse is also possible. Obviously, this requires a fairly large or sophisticated organization, but enterprise crime is now international, and cooperative work for financial or logistical advantages has already been seen in the drug trade. While the dominant debate views schools (or gun-free zones generally) as soft targets for gun violence, schools in particular also represent an attractive target for the human trafficking rings.

Pockets of extremist groups and cults can be found in American society. It is not beyond possibility that a 21st century equivalent of the Manson family (e.g., Fox and

Levin, 2014) could target a school with quasi-military tactics as the start of a conflict based on socioeconomic status, religion, ethnicity, a handicapping condition, or some other demographic or social difference. Even a perverted, live-fire version of the Humans versus Zombies game popular on college campuses, using real weapons painted with bright colors as camouflage, is within the realm of the possible.

Other weaponry. School violence has been equated with shootings because the previous incidents have often involved guns. However, stabbings, slashings, and injury from other weapon types are perhaps more common, but lack the capacity for multiple casualties that is inherent in firearms. The arsenal of attack contains other weaponry that has not yet been deployed, but may well be in the future: the underground arms trade usually appears in the headlines only when the police make a seizure, but what has been revealed suggests that explosives, incendiaries, and other weapons of mass destruction may become a greater threat to schools.

Explosives. Bombs were deployed at Columbine, but failed to explode. More recently, threats (fortunately thwarted) against schools have revealed not only the intent but also the capacity for such weapons (Associated Press, 2011a, 2012f, 2011e; Barry, Zayas, & Tillman, 2011; Boissoneault, 2017). Delivery systems are also variable: the pipe bombs at Columbine were carried into the school in duffel bags, but a variety of other forms of attack are possible. Prisons are finding ways to cope with the delivery of contraband cell phone launched over high fences by 'potato guns' and other forms of projectile launchers. The Federal Aviation Administration, the Border Patrol, and the nation's law enforcement agencies are currently trying to cope with the proliferation of

Unmanned Aerial Vehicles (UAVs) and other drone aircraft in the airspace on the continental U.S. (Archibold, 2009; Coppola, 2017; New York Times Editorial). Other forms of robotic delivery on land are also possible (including the use of radio-controlled model car racers, early and amply demonstrated in the 1988 Dirty Harry movie sequel *The Dead Pool*); all have the potential to defeat the existing Maginot Line of hardware installations promulgated as defenses against the classic “lone deranged gunman” stereotype that dominates the public (and media) imagination.

This paper does not propose that the dominant ‘single intruder/shooter’ model should be abandoned; far from it. The chance of that type of incident occurring remains high relative to the other probable threat types, and history is a persuasive oracle: indeed, the potential for copy-cat incidents in the wake of a high-profile event like Newtown is extremely high (Alexander-Bloch, 2012; Hager, 2012; Rendon, 2012). We merely argue against allowing tunnel vision to set in and close planning against other forms of potential violence against school populations. History is not linear, and threat preparation always takes place in an environment of balancing dangers: just because something has not happened yet does not mean that it never will, but just because it *can* happen does not make it inevitable that it *will* happen. Futures preparation cannot be a linear extrapolation from the present, but realistic preparations also must take into account the balance of budgetary and other resources, against a backdrop of the range of possibilities.

Benefits and Liabilities of the Reigning Safety Models

In the wake of Columbine, the emphasis on targeted violence by students took four forms: expanded efforts to reduce school bullying (see, e.g., Morrison, 2007); the institution of threat assessment teams; the widespread institution of lockdown drills; and, hardening physical access by adding metal detectors, security guards, controlled access, identification cards and protocols, etc. The first two sensibly stress *prevention* of violence and the efforts to improve the school climates have benefits well beyond prevention. Adolescent suicide is not usually considered as school violence, but is on occasion a consequence of unrelieved bullying (Maag, 2007).

Our purpose here is to examine the evolving nature of school defense against the ‘bolt from the blue’ events: forcible intrusion, active shooters, and other forms of targeted violence. The lockdown has been the standard defensive tactic, but has come under criticism as an inappropriate ‘one size fits all’ approach. Some safety advocates prefer a structured ‘If, Then’ approach to the occurrence of violence in school environments.

The lockdown is structured around the logic of minimizing access to potential targets of an aggressor, whether a shooter, a blade-wielder, or a hostage-taker. Behind locked doors, silent, with a low physical profile, students are sometimes less accessible targets: the operating theory is that a gunman or other intruder will move from room to room, seeking an easier target. In the meantime, a police response will be en route, arriving to find the intruder isolated against a backdrop of empty hallways. Well-rehearsed lockdown also prevents students from panicking, flooding the halls and

providing a shooter or aggressor with a target-rich environment. It keeps students under the guidance of an adult, for reassurance and direction, and aids in accounting for pupils in the aftermath of an untoward event.²

However, the precise conditions under which lockdown would be most effective are rarely encountered. There are always strategic gaps in the school day: recess, assembly, transition to special classrooms for music or art in the primary grades, and normal class transition times in the junior high, middle, and high schools. Lunchtime is common to all, usually putting students in open, unsecure areas where lockdown is difficult if not impractical. The periods immediately before beginning and after the end of the formal school day are marked by large, amorphous groups of students entering and leaving the grounds, some bunched waiting for buses, others streaming to and from the school on foot to their homes nearby. The 1979 shooting incident in San Diego, as well as shootings at West Paducah (KY), Chardon (OH), and Bethel (AK); took place before the beginning of the school day. The 1998 Salem (OR) shootings occurred primarily in the cafeteria. The 1989 Stockton (CA) shooting was done from outside the school, firing into the playground; the March 1988 Jonesboro (AR) shooting targeted students and teachers who filed into the playground in response to a false fire alarm.

² Many institutions have different grades of lockdown, often corresponding to the color-coding used by the Department of Homeland Security. Full lockdown – which is the point of reference in the main text – is applied only for intruders or direct threat: classrooms locked and darkened to give the impression of being empty, students in a low or concealed position, cell phones off and no conversation. Moderate lockdown may be initiated when there is potentially dangerous police activity in the nearby area, but no direct threat: outer doors are locked, and no one is allowed in or out, but normal classroom activities continue. Some intermediate lockdown procedures may allow movement from one room to another; others might not, depending upon the situation.

A modern building built close to the ground, with windows and sometimes doors to the outside, presents different vulnerabilities. The high-profile incidents named above, with the exception of Jonesboro, all involved the shooter entering the school, and the focus of safety plans has been on active shooter threats inside the school grounds. To date, no school has experienced a perimeter shooter who targets students through the windows of their classrooms (and thus cannot be thwarted by the locked doors of a lockdown).

Other vulnerabilities exist with the lockdown model. In most schools, the order to lock down comes from the administrative office. If the members of that office are the shooter's first targets (as they were at the Sandy Hook school in Newtown), the sound of gunfire may be the only audible indication of a problem, leaving individual classroom teachers to make their own decisions. In the sprawling campuses of regional high schools, even gunshots may not reach the farthest classrooms, or into a noisy gymnasium or sports field.

At the college level, the functional equivalent of the school lockdown is a 'shelter in place' order (or similar), using broadcasts and automated calling systems to alert students and staff to the police activity on campus. Like the lockdown, shelter in place directives strive to minimize the activity on campus, eliminating new targets for the shooter, and clearing the field for police to engage the shooter or intruder with minimal chances of collateral injuries to bystanders. It does not reach visitors to the campus or members of the community who choose not to subscribe to the alert service, and will not protect those who choose to ignore it.

For some people, however, lockdown carries a distinct downside: the 'sitting duck' scenario. The incident at Newtown, in which first graders were victims of multiple shots in their classroom and teachers died trying to shield them, has accelerated the discussion of what other responses should be available. A number of commercial enterprises now market training programs beyond lockdown. They offer a combination of mental preparation and training, against the possibility that an intruder defeats a lockdown. One basic program is known as A.L.I.C.E.: Alert, Lockdown, Inform, Counter, Evacuate (U.S. Department of Homeland Security, 2008). The first three are standard elements in a typical school lockdown; the latter two are contingency-based, primarily addressing situations in which lockdown is broken, or appears to be failing: the 'Flight and/or Fight' contingencies.

'Alert' and 'Lockdown' are typical initiation procedures, a specific code to inform all within earshot (usually over the school's loudspeaker) that a threat is imminent and all classrooms should go into lockdown. 'Inform' has different variations depending upon the school, but includes theoretically non-obvious techniques to inform responding authorities of the number of individuals in each room.

'Counter' is a set of back-to-the-wall desperation moves for survival, when confronted with a gunman or other threat. The accounts of Columbine and Virginia Tech survivors, cowering beneath desks waiting for the assassins to decide their fate, is the backdrop for most debates of this sort, but Counter is just as viable an option for sudden confrontation (such as at the initial onset of the attack). Counter techniques include close-hands techniques to disarm a gunman, hurling objects at his or her head to

distract or unbalance him or her, swarming the perpetrator, and similar strategies, often coupled with attempts to escape.

Inherent in this notion is the probability that not everyone will survive, but the sacrifice of some (voluntarily or by happenstance) might improve the chances of others. 'Doing something is better than doing nothing' is also implied, and leads to the suggestion that teachers be armed, or conversely 'gun-free zones' transformed into selectively or generally armed zones, as discussed below. In essence, the purpose of A.L.I.C.E.-style training is to instill resilience and hardiness against an attack scenario that could materialize the next day, but may never materialize at all.

The effectiveness of Countering techniques is conditional upon the age and physical capacity of the individuals who are threatened. For example, adult teachers and college- and high school-aged students may possess the physical attributes that make resistance feasible; below the age of twelve, and certainly for first- and second-graders, that option is less viable. The same will be true for some special-needs students. Even among the more developmentally capable, and physically and mentally competent persons, including adults, the mindset needed to make an effective counter may not be present, even with appropriate training. The extremely distant likelihood of an actual encounter also weighs against effective reaction should the encounter materialize months or years after the training. It is not so much a danger of crying 'Wolf!' as it is a form of mobilization fatigue (Krause, 2012).

Evacuate/Escape alternatives are also intuitively logical: why stay in an enclosed space, a 'sitting duck,' if there is a chance of escaping? That logic, too, is conditional

upon a wide range of factors that are, in many ways, unknowable to the intended victims and/or occupants of a classroom, workplace, or other facility. The logistics of escape are never fully clear. Exiting even a nominally-secure haven into the corridor where the sounds of gunfire are audible runs the risk of presenting a target to the shooter; exiting by other means run a smaller risk of becoming a target for a confederate. This has been the case only in the Jonesboro shooting, where a confederate pulling the fire alarm led to an evacuation onto the playground, giving the concealed shooter outside a clear field of fire and a target-rich environment.

‘Escape’ is also age-problematic. Middle-school children might be of an age where directions to scatter and reassemble at a particular gathering spot can be followed (in Newtown, it was a nearby fire station). For younger children, depending upon the nature of the immediate neighborhood, weather conditions, season of year for northern latitudes, and other factors, scattering may risk exposing them to other dangers. Whether to shelter or to scatter provides the greater protective option may not be conducive to determination before the onset of incident. This is complicated by the fact that no two incidents will present exactly the same range of choices due to context-specific factors, like dangers that may present themselves in the case of mass evacuation into hazardous industrial areas.

One of the expectations of the school environment is that all children will be under the supervision of competent adults: an active shooter or other unfolding attack may undermine this assumption. For instance, the schoolteacher in the West Nickel Mines School was ordered to leave by the gunman under threat of seeing her pupils

executed. This is similar to a police officer or armed guard relinquishing a firearm under some circumstances. The right or wrong choice in such circumstances can only be seen retroactively, if at all. In theory, ordering pupils to scatter can be viewed as the logical thing to do under some circumstances. In actual practice, it might be retrospectively viewed as an abandonment of the same duty to protect.

Formal strategies aside, concerned parents are also availing themselves of more opportunistic forms of asserted protection: bulletproof backpacks to ward off bullets have taken the place of transparent backpacks to prevent students from smuggling guns into schools (Associated Press, 2012n). At least one study has been conducted on the degree of protection against bullets offered by textbooks of different sizes (Spencer & Stone, 2009). No doubt other purported protective devices will emerge in the market.

Behind all of these strategies, however, lies the stark fact that the advantage in an active shooter situation lies with the shooter until the police arrive. Gun advocates, embracing the bumper-sticker slogan, “When seconds count, the police are only minutes away,” are now pressing for the presence of armed adults in all schools as one proposed solution to this problem. (For further discussion on response, see Buerger and Buerger, 2010).

Other Solutions

There is a division in American society on the subject of privately owned firearms. One side believes the widespread possession of firearms to be irreversible, and holds that personal weapons are necessary to defend against criminal predation or

attacks arising from mental illness. The opposing side holds that it is the prevalence of firearms that enables some to undertake criminality, and provides a means for targeted lethality in cases such as Newtown. The access to guns enables and emboldens those who would not undertake their crimes without guns.

For the pro-gun group, the concept of a gun-free zone is an advertisement to mass killers that they can kill without resistance. All scenarios envisioned by this side involve a single gunman face-to-face with a vulnerable victim or population of victims, and asks: “Wouldn’t you rather have a firearm for self-defense?” It is the central premise to the ‘good guy with a gun’ argument.

We note that there are currently two options characteristic of this proposal: the presence of police officers or armed security, as promulgated by the NRA (Sullivan, 2012), and the broader assertion that teachers should be allowed to carry weapons on campus. A third option proposed in Maricopa County (AZ) by former Sheriff Joe Arpaio, suggested placing armed posse members in the schools there (Associated Press, 2012o). Note that the *in loco parentis* duty to protect argument serves all sides equally; it is the practical application that is open to differing interpretations.

The *in loco parentis* argument may not extend to college campuses, because of the absence of any legal requirement to attend college. Many campuses are open, encourage visitors, and have galleries and host events open to the community to a degree that is much greater than that for most public and private K-12 institutions. The personal protection rationale for students carries more sway under such circumstances, and whether any duty to protect others attaches is questionable. The issues of duty and

liability for faculty and other college and university employees (other than bonded police officers) is both less certain, and highly variable by state and court jurisdiction as well as from institution to institution. .

Implications of Changes in the Educational Establishment

Much of the discussion above has been dominated by the worst-case scenario (targeted violence) to the exclusion of age-specific conflicts. That is principally an unfortunate consequence of the aftermath of the tragedy at Sandy Hook Elementary School in Newtown, but it is an equally unfortunately recurring problem. Many of the high profile events have been linked to the lower level violence, bullying, and harassment that are part of many school experiences for children (Patchin and Hinduja, 2012). The good work of our colleagues in other disciplines continues to try to reduce those negative experiences to the smallest frequency possible, but there are other currents affecting education at all levels, some of which may have a downstream impact on school violence as well (Hinduja and Patchin, 2007).

Efforts toward improving American education, such as the No Child Left Behind Act or the Race to the Top initiative emphasize a link between standardized test scores and teacher tenure and salaries. For-profit educational institutions have sprung up at all levels, potentially draining schools of valuable financial resources as parents withdraw their support from school-related taxes and bond issues. The loss of discretionary financial resources, particularly in public schools, thus may place limitations on what

approaches the public schools can do in order to prevent and perhaps respond to school violence.

Although illicit drug use among high school students and youth has apparently stabilized at low levels (NIDA, 2017), across all the educational levels, more and more students are coming to schools and colleges on psychotropic and other mood-affecting medications (e.g., Howie, 2014), likely a byproduct of a shift in the medical and mental health fields. At the collegiate level, state and private institutions facing economic challenges and increased competition become more dependent on tuition, and arguably less selective. The tensions created by differing expectations, compounded by the rapid increase of student debt, have the potential to lead to behavioral outbursts, some of which culminate in serious violence.

At the college level, one of the recent fads is Massive Open Online Courses, or MOOCs. The fad may already be fading, (see Shah, 2016), with only a handful of institutions considering completion of a MOOC for transfer credit. The relative effectiveness of on-campus instruction and MOOCs at inculcating employable skills has yet to be evaluated by the receiving fields. If MOOCs or other emerging trends do succeed, they will represent alternatives to the classic expectations of what college means. The movement is already underway in the form of transfer credits from 2-year colleges to 4-year institutions.

Whether any of these trends, or some combination, exacerbate or ameliorate the problem of violence on school grounds or college campuses is essentially unknowable. They are not inevitable predictors of more (or less) violence. Nevertheless,

they are trends that should command the attention of those concerned about potential violence in schools and colleges.

In considering all of the above we must also consider the limits of what we know. For example, what do we know about false positives/negatives and effectiveness of threat assessment teams? Do they diffuse responsibility or delay decision making versus improve decision making and responsiveness? How should we weigh proposals to further harden -- or to reduce hardening of -- schools, buses, etc.? What costs (including both economic and social), what benefits and under what circumstances? In particular, we ought to be wary of 'one size fits all' solutions.

Weak Signals on the Horizon

Future studies oftentimes seek to consider the 'weak signals on the horizon'; those events, indicators, and data points that might suggest an emerging trend that will, in time, generate an appreciable and clarified level of significance. Not all weak signals manifest into significant factors, so their consideration must be restrained accordingly. Nonetheless, there is utility in seeking to understand and monitor tendencies and trends that are suggestive of emerging challenges and future opportunities. Such monitoring can facilitate more timely recognition of, and response to, issues that represent future threats and difficulties; similarly, future prospects for improvements can be more leveraged in a timelier manner and/or to more effective outcomes. Within the context of school violence and mass violence, several weak signals may be indicative of future challenges for public safety personnel, political leaders, and society as a whole.

This white paper is being released mere weeks after the school shooting in Parkland, FL, left 17 dead and less than six months after a mass shooting left 58 dead and 851 injured in Las Vegas. At the same time, the understanding of potential Russian efforts to influence aspects of US social media consumption and use seem to be growing on a daily basis. Separating the latter from the often-times partisan stances on the role that conduct may or may not have played in the results of the 2016 presidential election, it seems unambiguously clear that social media platforms currently dominating the online activities of many US citizens are being targeted in a manner suggestive of efforts to influence or manipulate the views, attitudes, and beliefs (if not the actions) of users.

The Parkland school shooting has been marked by new developments that did not attend earlier shootings of similar kind. Whether these are weak signals of an emerging social movement is not apparent at present. Foremost has been the activism of the students demanding change not only at the Marjory Stoneman Douglas High School, but also at countless other schools across the nation. Where previously the voices heard were from parents, teachers, law enforcement, and politicians, the faces and voices of the aftermath of Parkland have been those of the students. It has been students who have dominated the outcry as they push for change to prevent such massacres from occurring again and again. This is an important shift in the narrative and aftermath of school shootings and it has emerged rapidly, to include students becoming highly followed voices on Twitter, taking strong stands in media interviews, and challenging elected officials and representatives of advocacy groups on a national

platform. Though these students have often noted they are kids, not adults, they have taken a role of leadership and advocacy, encouraging youth across the country to mobilize, protest, and call for action. This set of observations is not an judgment of whether this trend is 'good' or whether the youth are advocating for the 'right' reforms, but the aftermath of Parkland has been appreciably different from all prior school shootings and may well represent a permanent shift, at least in the context of mass violence at schools, if not in other settings or for other forms of violence.

An immediate pushback to the student activism emerged from both the deniers and (apparently) the Russian trolls and bots, both seeking to influence Americans' perceptions of both the event and the appropriate policy responses, if any. Accusations that the students were actors who were paid to go from protest to protest have been heard not only from far-right conspiracy theorists but also from hard-right members of state legislatures and their aides. Others have dismissed the voices of students as simply being voices of 'kids' and 'children' too young to understand the complexities of the situation and the appropriate ideological and policy responses to gun control and violent crime. Those monitoring the sites identified as Russian 'bots' have noted a sudden shift in content, away from the politics of the last election to the two sides of the gun control issue grounded in the Parkland shooting. The intention of this shift is unclear, but if nothing else, it is presumably intended to further strain the fabric of divisiveness and division within the US public.

The proliferation of the internet and social media have opened easier and deeper pathways for conspiracy theories to reach members of the public. The shooting

at Sandy Hook has been dismissed as government-sponsored conspiracy almost since the day of that event, just as the Oklahoma City bombing, 9/11 attacks, and Las Vegas shooting have been the focal point of arguments of government manipulation and interference. Once almost universally regarded as a tragedy, mass killings at schools have entered the era of 'fake news', as differently motivated factions attempt to dictate, influence, or shift Americans' perceptions of such events. Whether these weak signals will manifest into stronger trends remains unclear at this time, however this set of signals might portend some challenging situations and circumstances for public safety and educational officials, victims and families of school shootings, political leaders, and US society.

Summary

The future of school violence, at least in part, depends upon the slow progression of precursor events -- bullying, assaults, and grudge shootings and stabbings with one or two victims, usually non-fatal – occasionally punctuated by a more serious event. Even though it has not played a predominant role in the contours of the debates offered here, the role of prevention of school violence by members of the school community is of paramount importance.

The more serious violence that dominates the national discussion has produced a new tenor of discussion. This White Paper has addressed some of the proposed solutions, but this debate continues, unresolved. Little empirical evidence can be garnered from these rare events to lend to incontrovertible paths forward. Most gun

owners are responsible, and not criminal. Most schools will never have to endure the tragedy of Columbine or Sandy Hook. A rational discussion of the most promising avenues to prevent and respond to isolated events (including the more frequent, and under-examined occurrences of single-victim shootings and stabbings on school campuses and at school-related functions) cannot be driven by the specific details of the rare but horrific incidents that have recently been experienced.

The issue of school violence and the questions, issues, implications, and concerns surrounding the prevention, response, and aftermath of such events shed light on a number of unresolved questions. Public safety officials, school leaders, and elected officials, as well as members of the general public, have recognized many of these questions, yet their answers or solutions remain elusive.

1. The present threat assessment model proceeds at a pace that seems insufficient for the digital nature of present threats. How can threat detection and response be enhanced, while accounting for the large number of false positives and protecting the rights and interests of students?
2. What is the best way in which to secure schools, while allowing them to remain learning environments? How do we balance the need for security without making schools highly secure facilities on par with prisons?
3. What role should security and public safety personnel play within those environments? While placing more police in school might seem a logical response to enhance security and safety, history has also shown this practice increases the criminalization of 'routine' misbehavior by students, particularly male and minority students (Heitzeg, 2016).
4. In the aftermath of tragic incidents, how do public safety, education, political, and community leaders temper the understandable emotional climate, encouraging thoughtful responses and limiting the fragmentation of public opinion? Raw emotions are strong and should be expressed, but they can produce counterproductive results.
5. When intelligence indicating potential threats (such as are emerging about Nikolas Cruz's history of behavior), both police resources and permissible legal interventions have gaps. How do we best develop appropriate warning systems that minimize threats, while not compromising other liberties and privileges?

6. As education at all levels moves increasingly online, either in part or in whole, how will incidents of mass violence manifest in that digital space, if at all? To what extent, and in what ways, will schools shift their efforts to provide for safe and secure digital learning environments? What will the public expect of school and police personnel within digital spaces?
7. Demands for increasing physical and information security will, if met, require increased funding from tax dollars and tuition. Will such expenses be funded by increasing taxes or tuition, and/or by shifting existing resources away from other government expenditures? If the latter occurs, whatever population segments find 'their' funding stream weakened will be less than enthusiastic about the change. What happens then?
8. Will our use of criminal justice resources prove either wise or effective? Historically, policy responses to major social problems and conflicts have not been optimally efficient, effective, and equitable, at least at the onset.

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