

Offender and Offense Characteristics of a Nonrandom Sample of Adolescent Mass Murderers

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ABSTRACT

Objective: The authors conducted a descriptive, archival study of adolescent (≤ 19 years of age) mass murderers—subjects who intentionally killed three or more victims in one event—to identify demographic, clinical, and forensic characteristics. **Method:** A nonrandom sample of convenience of adolescent mass murderers was utilized. **Results:** Thirty-four subjects, acting alone or in pairs, committed 27 mass murders between 1958 and 1999. The sample consisted of males with a median age of 17. A majority were described as “loners” and abused alcohol or drugs; almost half were bullied by others, preoccupied with violent fantasy, and violent by history. Although 23% had a documented psychiatric history, only 6% were judged to have been psychotic at the time of the mass murder. Depressive symptoms and historical antisocial behaviors were predominant. There was a precipitating event in most cases—usually a perceived failure in love or school—and most subjects made threatening statements regarding the mass murder to third parties. The majority of the sample clustered into three types: the family annihilator, the classroom avenger, and the criminal opportunist. **Conclusions:** The adolescent mass murderer is often predatorily rather than affectively violent and typically does not show any sudden or highly emotional warning signs. Although the act of mass murder is virtually impossible to predict because of its extremely low frequency, certain clinical and forensic findings can alert the clinician to the need for further, intensified primary care, including family, school, community, law enforcement, and mental health intervention. *J. Am. Acad. Child Adolesc. Psychiatry*, 2001, 40(6):719–728. **Key Words:** murder, mass murder, homicide.

Despite the sensational reporting of the commercial media, a plethora of data indicates that homicide among juveniles has substantially decreased during the past decade. Juvenile arrests for homicide decreased by more than 50% between 1993 and 1998, and all violent juvenile crime has declined since 1994 (Federal Bureau of Investigation [FBI], 1999). Homicides in U.S. schools reached their peak in 1992–1993 ($n = 42$), and 21 were reported in 1998–1999 (National School Safety Center, 1999). Cause of death in 1997 for young persons aged 5 to 24 was most likely to be a motor vehicle accident ($n = 11,863$) and least

likely to be an intentional killing in school ($n = 27$). In fact, suicide was 165 times more likely to cause the death of a young person than was school homicide during that same year (National School Safety Center, 1998; National Vital Statistics Report, 1998). The rate of serious violent crime in school is about 1:1,000 students and appears to negatively correlate with socioeconomic status (National Center for Educational Statistics, 1998).

There is a low-frequency and high-intensity crime, however, that appears to be on the increase—adolescent mass murder. Between 1996 and 1999 there were six incidents of mass murder in schools that involved at least three fatalities (National School Safety Center, 1999). The public perception of these arguably motiveless acts, as well as saturation coverage by the electronic media, likely stimulates both generalized fear and fallacious predictions, especially among parents.

Scientific investigation of adolescent mass murder, moreover, is very limited. Benedek and Cornell (1989) developed a typology for understanding juvenile homicide and found three distinct groups in a sample of 72 adoles-

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cent murderers. In ascending order of frequency, these were: clearly psychotic subjects; subjects engaged in severe interpersonal conflict, often with a family member; or subjects who committed a homicide in the course of another crime, most often robbery or rape. Six of their cases were multiple homicides; three involved the murder of at least one family member, and three involved the murder of strangers. McGee and DeBernardo (1999) studied 14 cases of adolescent mass murder and asserted a "profile" of the "classroom avenger." They described him as a white male, average age 16, raised in a middle-class suburban or rural family, with no history of mental illness, disability, or retardation. He is considered a "loner or outcast" by his schoolmates, has had a history of attachment difficulties, but appears outwardly normal. He is quite interested in violence but has no violent history. He spends a great deal of time immersed in violent fantasies of revenge and plans the mass murder by selecting targets, locations, times, and methods. The incident is precipitated by rejection by peers or disciplinary action by an authority figure. He meets diagnostic criteria for an atypical depression and mixed personality disorder with paranoid, antisocial, and narcissistic features.

The New York Times (Fessenden, 2000) also conducted a systematic analysis of 102 cases of "rampage killers," of whom 16 were adolescents (<18 years of age), in consultation with the first two authors (J.R.M. and A.G.H.). Their investigative reporters found that insufficient recognition of mental illness played a predominant role in the killings, that the adolescents distinguished themselves from adult mass murderers by increased collaboration with others (sometimes killing in pairs), and that there were fewer suicidal outcomes and less emotional detachment.

Both the FBI and the U.S. Secret Service posted reports of their studies of school shootings on their respective web sites (O'Toole, 2000; Vossekuil et al., 2000). Although these studies were not peer-reviewed, published in a scientific journal, or focused on mass murder, they offer preliminary findings concerning adolescents who threatened assault, injured, or killed others at school with a firearm. The FBI study offered a four-pronged threat assessment model—personality of the student, family dynamics, school dynamics, and social dynamics—in their study of 18 cases (O'Toole, 2000). The Secret Service study scrutinized 41 "attackers" involved in 37 school shootings and found that the incidents were rarely impulsive, that there was no specific profile of a "school shooter," and that, although targets were not directly threatened, other stu-

dents were usually involved and the attacker engaged in some behavior that caused others concern prior to the incident (Vossekuil et al., 2000).

We decided to conduct this forensic and clinical study in the wake of the Columbine mass murder in April 1999, to attempt to contribute to the meager database available and to follow up our study of adult mass murderers (Hempel et al., 1999).

METHOD

We defined adolescent mass murder as the intentional killing of at least three victims (other than the perpetrator) in a single incident by an individual 19 years old or younger. We limited our data collection to individuals who used a firearm, cutting instrument, or blunt object with or without other weapons, as these account for most of the killing instruments used in any homicide in the United States (FBI, 1999).

We searched multiple psychiatric, psychological, medical, social, and criminal computer databases to identify cases that met our inclusion and exclusion criteria. When a case was identified, it was included if it provided credible (verifiable) data to substantially complete a codebook of 79 variables (available from the authors). Primary data sources that we judged to be credible included courtroom testimony (civil and criminal); scientific articles; academic books; video- and/or audiotapes of perpetrators, family members, survivors, or witnesses; and our interviews with law enforcement officers directly involved in the particular case. Secondary sources included newspaper and magazine articles and trade publications. Statistical analyses included only descriptive methods because of the small sample size, missing data, and lack of a comparison group. Percentages were based on the proportion of total subjects for whom the variable in question could be measured. Researchers were not blind to any aspect of the study.

RESULTS

Data sufficient for inclusion in this study were gathered on 27 incidents of adolescent mass murder involving 34 perpetrators. Although a few other cases (less than six) were found that did not provide sufficient credible data for inclusion, and there are other cases of school shootings that resulted in fewer casualties, our comprehensive search leads us to conclude that our sample represents most of the universe of adolescent mass murderers, as we have defined them, in North America in the past half century. Five subjects killed in more than one location, but in each case their actions appeared to be an extension of the initial incident when evaluated with regard to homicidal plan and/or motivation. All the mass murders occurred between 1958 and 1999; over half ($n = 14$) occurred between 1995 and 1999.

Subject Characteristics

All subjects were male. Ages ranged from 11 to 19, with a mean and median age of 17. The majority ($n = 27$; 79%) were white, three (8.8%) were Hispanic, two (5.9%) were

African American, one was Native American and one was Asian American. Seventy percent ($n = 19/27$; the denominator indicates the number of subjects for whom data were sufficient to determine presence or absence of the variable) were described as "loners" when data were available, a descriptor we applied to the subject if credible biographical data (interviews with family members, teachers, or peers) indicated such self-labeling, or if he showed a marked tendency to spend time alone rather than with others. Seventeen percent ($n = 4/23$) had a history of bullying others, whereas 43% ($n = 10/23$) were bullied by others. We defined "bullying" as long-term victimization of a student by his peers, and included both physical and psychological attacks. The behaviors usually documented were teasing, ridiculing, vandalizing of property, and physical violence (Hoover et al., 1992). Thirty-seven percent ($n = 10/27$) of the subjects came from separated or divorced families. These data are noted in Table 1.

Forty-four percent ($n = 11/25$) were biographically described as *fantasizers*, a term that we defined as a daily preoccupation with fantasy games, books, or hobbies. Forty-two percent ($n = 11/26$) had a history of violence: credible evidence of at least one violent act against a person, animal, or property before the mass murder. Violent acts included assaults and injuries to sexual intimates, family members, acquaintances, or strangers and ranged from killing a dog or cat to killing a person. Forty-six percent ($n = 13/28$) of the subjects had a self-reported or official arrest history. Sixty-two percent ($n = 16/26$) had a

history of substance abuse as defined by the *DSM-IV*: "a maladaptive pattern of substance use manifested by recurrent and significant adverse consequences related to the repeated use of substances" (American Psychiatric Association, 1994, p. 182). Subjects abused alcohol, marijuana, cocaine, amphetamine, LSD, PCP, inhalants, and heroin. There were insufficient data to determine whether the subjects were influenced by alcohol or other substances at the time of the mass murders.

Twenty-three percent ($n = 7/30$) of the subjects had a documented psychiatric history: at least one psychiatric hospitalization or one visit with a mental health professional such as a psychiatrist, psychologist, or social worker. Four of the subjects had been treated with antidepressants, and one was treated with methylphenidate. As a result of confidentiality laws for the protection of minors, these data likely underestimate the subjects' mental health treatment.

We also assessed evidence of psychotic symptoms at the time of the mass murder. Only two subjects (6%) exhibited behaviors that led us to infer the presence of delusions, auditory or visual hallucinations, or loss of contact with consensual reality. Depressive symptoms were suggested in several subjects at the time of the mass murder but were poorly documented, precluding us from suggesting a *DSM-IV* diagnosis. Sixty-three percent of the subjects who killed in schools ($n = 5/8$) had depressive symptoms at the time of the crime. Odd, reclusive and dramatic acting-out patterns of behavior—perhaps a prelude to adult personality disorder—were suggested by history in a majority of the subjects. We determined these patterns through our combined psychiatric and psychological clinical judgments and through discussion of the totality of evidence available to us in each case. We did not attempt to determine whether any of these behaviors were diagnosable personality traits or would meet threshold criteria for a personality disorder as defined in the *DSM-IV*.

Forty-one percent ($n = 14/34$) of the subjects had a history of at least one established sexual-affective bond with a female. All subjects were known to be heterosexual, but one subject was alleged to have sodomized and forced oral sex on at least one of his male victims. Two of the subjects were married, and one subject had a pregnant common-law wife at the time of the mass murder.

Forty-eight percent ($n = 12/25$) of the subjects were preoccupied with war or weapons. We scored this variable if a noticeable and documented amount of the subject's time before the mass murder was spent focused on themes

TABLE 1
Characteristics of Adolescent Mass Murderers ($n = 34$)

Variable	Present	Absent	Insufficient Information
"Loner"	19	8	7
History of bullying	4	19	11
Victim of bullying	10	13	11
Parents separated/divorced	10	17	7
"Fantasizer"	11	14	9
History of violence	11	15	8
Arrest history	13	15	6
Substance abuse history	16	10	8
Psychiatric history	7	23	4
Psychotic at time	2	32	0
History of sexual bond	14	20	0
Weapons preoccupation	12	13	9
Violent nickname	11	23	0
Discussed murder	15	19	0
Threats to third parties	14	10	10
Precipitating event	20	14	0

of war or violence. Behaviors included ownership of a large number of weapons such as firearms, knives, or swords; ownership of a large amount of audio, video, or reading materials that had war or weapons as a primary theme; ownership or frequent wearing of military uniforms, including combat fatigues; frequent trips to a shooting range; preoccupation, often just in fantasy, with martial arts; verbiage that often focused on weapons or violence; evidence of grandiose fantasies centering on war or weapons; infatuation with Nazi regalia; infatuation with street gangs (some of the white subjects were fascinated with African-American street gangs); evidence of idealization of famous fictional and nonfictional violent characters; and taking a nickname associated with a violent figure or a violent theme. Thirty-two percent ($n = 11$) of the subjects had nicknames, often related to violence, rebellion, or aberration: "Lil Wiz," "Baby O," "Bonnie and Clyde," "Drew," "Damien," "Vodka," "Baby Brains," "Luke Skywalker," "Slicer-Thundercap," and "Reb."

Forty-four percent ($n = 15/34$) of the subjects discussed the act of murder with at least one person before the event, and, in 58% ($n = 14/24$) of the events, threatening statements regarding the mass murder were made, usually to third parties. The threats were usually uttered several days before the killings, but some were made many months before. They included, "Tomorrow you find out if you live or die," "Wouldn't it be fun to kill all those jocks," and "Don't be in school tomorrow." In 42% of the mass murders there was no evidence of any threats directly communicated to the targets beforehand (false negative rate).

Precipitating events, or triggers, were documented in 59% ($n = 20/34$) of the subjects' histories. These were defined as events that occurred prior to the mass murder and were described by the perpetrator or close acquaintances as significantly mentally or emotionally disturbing to him, or they were obvious from scrutiny of the perpetrator's social history. Such events included the loss of a real or fantasized relation with a female, a family dispute, suspension from school, insults by peers, termination from a job, anger over involuntary hospitalization, a physical injury that hampered athleticism, and denial of entry into the military. These triggering events usually occurred within hours or days of the mass murder.

Incident Characteristics

Firearms were the most commonly used weapon in adolescent mass murder and were absent in only four (15%) events. Firearms were used alone in 16 mass murders

(59%). There were nine known semiautomatic pistols, three known revolvers, 11 known rifles, six known shotguns, and one machine pistol. The most common caliber was .22. Rifle calibers ranged from .22 to .44. The most common shotgun gauge was 12. Other weapons included an ax, a samurai sword, two baseball bats, a hammer, and various hunting, combat, and kitchen knives. The number of weapons brought to the mass murder ranged from one to seven (mean = 2.4, median = 2.0). Firearms were acquired by stealing ($n = 5$), taking from home ($n = 9$), purchasing ($n = 9$), utilizing a weapon already at the site ($n = 3$), or borrowing ($n = 1$). Three firearm acquisitions were unknown.

The 27 mass murders in this study accounted for 210 casualties: 126 people were killed and 84 were wounded. The mean number of deaths was 4.7 (range 3–13) and the mean number of injuries was 3.1 (0–25). In 81% of the mass murders, the adolescent knew all of his victims, and the kill-to-wound ratio was 1:0.67. All of the victims were strangers to the murderer in only two events. The subjects acted in pairs in seven of the mass murders (26%). In these cases the mean number of deaths increased to 5.1, and the mean number of injuries increased to 4.4.

In our study of adult mass murder (Hempel et al., 1999), we defined a *psychological abstract* as "the sentence or words uttered immediately prior to, or during, the mass murder" (p. 217). The psychological abstract is usually said in a loud voice with great emotion, and we think it provides insight into the perpetrator's conscious intent and motivation for the killings. In our sample of adolescent mass murders, there were seven identified psychological abstracts in 19 cases in which there was sufficient evidence to consider them present or absent (37%, see Table 2). They primarily suggest themes of anger and control.

There were two "bifurcated" mass murders, in which the subject first killed family members and then went on to kill victims at his school. The kill-to-wound ratio in

TABLE 2
Words or Sentences Uttered by the Subjects Immediately Before or During the Adolescent Mass Murder

"I'll see you in hell."
"I've had a bad day."
"Police, everybody down. Let's kill 'em. No witnesses."
"This ends now."
"I'm sorry."
"Today's a good day to die. We're gonna die."
"Jocks, get up."

these cases was 1:4.6, although the lethality rate among family victims was 100%.

A Preliminary Typology

We grouped the 27 mass murderers into five types: family annihilators ($n = 10$), classroom avengers ($n = 4$), criminal opportunists ($n = 3$), bifurcated killers ($n = 2$), and miscellaneous ($n = 8$). The term *family annihilator* was first used by Dietz (1986) to describe a type of adult mass murderer—typically the senior male in the household—who was depressed, paranoid, or intoxicated at the time of the offense. McGee and DeBernardo (1999) coined the phrase *classroom avenger*, as we described earlier. The *criminal opportunist* committed a mass murder during the course of another crime, such as robbery, often to eliminate witnesses. The *bifurcated killers* established a lethal bridge between family annihilation and classroom revenge, and the *miscellaneous group* included subjects with diverse motives ranging from sensation-seeking, to occult beliefs, to fantasized “pseudocommando” identities (Dietz, 1986). In Table 3 we descriptively compare the first three types of subjects across several variables. Inferential comparisons were not done because of the small number of subjects in each group and the missing data for many of the variables.

The following three case studies are representative examples of the first three types—the majority of mass murders—within our proposed typology.

The Family Annihilator. On September 15, 1987, 19-year-old subject 1 left his wife in a parked vehicle and, carrying a pair of rubber gloves and his .22 caliber rifle, walked through the woods to his father’s house near Lynchburg, Virginia. He argued with his father about his deceased mother’s fidelity; after the father stopped

the argument and invited him outside to look at a recently purchased automobile, subject 1 shot him in the back of his head and between the eyes. He then got a .22 caliber pistol from underneath his father’s mattress.

A few minutes later his stepbrothers arrived home from school. He shot 10-year-old Donnie in the back of the head and temple, then chased 13-year-old J.J. and shot him as he ran. He shot him two more times and stabbed him five times. When his stepmother returned home, he wounded her with the pistol, then stabbed her in the chest and slashed her throat multiple times. Subject 1 ran from the house, threw his shoes and knife in a dumpster, and tossed the rifle out the window of his car, which his wife was driving.

At trial he testified that he and his wife had gone to the family home the night before, but he could not commit the murders then. When asked what led up to the murders, he said, “They never treated me like a son—they treated me like an outsider all the time. I mean—I don’t think they cared.” When he argued with his father, he reported, “I was getting mad. I was sweating. I was getting real hot and I was shaking.” When asked why he committed the murders, he responded, “I don’t know. I was just mad. I was just—I don’t know really why I did it. I didn’t mean to. It just happened.” After he shot his father, he testified, “I just kind of stared at him for a minute—I don’t know—I was scared—I didn’t know what to do. And then I shot him again” (excerpts from Commonwealth of Virginia v Buchanan). Subject 1 was sentenced to death and executed in 1998. His last words were, “I’m ready to go . . . get the ride started.” All psychiatric evidence was sealed by the court.

The Classroom Avenger. On December 1, 1997, 14-year-old subject 2 shot to death three female students and injured five others at a prayer meeting held at Heath

TABLE 3
Frequency Comparisons Across Three Groups of Adolescent Mass Murderers for Select Variables

Variable	Typology		
	Family ($n = 12$)	Classroom ($n = 8$)	Crime ($n = 4$)
Ever discussed murder	63 (8)	63 (8)	0 (2)
Victim of bullying	50 (6)	75 (8)	33 (3)
Fantasy preoccupation	29 (7)	75 (8)	50 (2)
Weapons preoccupation	38 (8)	71 (7)	100 (2)
Substance use history	63 (8)	29 (7)	33 (3)
Depressive symptoms	2	5	0
Antisocial behaviors by history	3	1	2

Note: Values represent percentages; numbers in parentheses and n 's indicate number of subjects for whom adequate information was available to determine presence or absence of variable. The two “bifurcated” subjects were counted twice, once in the family and once in the classroom categories.

High School in West Paducah, Kentucky. He was armed with a .22 caliber Luger Mark II handgun, two .22 caliber semiautomatic rifles, one double-barreled shotgun, and one single-barreled shotgun. Each of the weapons was fully loaded, and he brought extra clips for his handgun and 600 rounds of ammunition. He had stolen the weapons from a neighbor several days earlier.

Subject 2 had written angry essays about wanting to strike out at others, felt weak and picked upon, and evidenced chronic suicidal ideation. He wrote a class essay entitled, "The Halloween Surprise," that described how a boy named Michael gives corpses to his mother as a gift. Several months before the mass murder, he complained that the student newspaper suggested he might be gay and that he was called a "faggot" on many occasions after its publication. He was physically small and immature, and witnesses reported that he "had a crush on" one of the girls in the prayer group and felt his advances were rebuffed. The day before the killings he warned another boy to not attend. When he finished shooting, he begged another student to kill him.

Subject 2 was clinically depressed, reported auditory hallucinations calling his name, and was paranoid, believing that he was being talked about and watched. He had brought handguns to school on two prior occasions and brandished them, but no one reported these events to school authorities. After he surrendered, subject 2 disclosed to investigators that he had seen the 1995 film, *Basketball Diaries* many times. In the film, actor Leonardo DiCaprio's character fantasizes that he is dressed in a black leather trenchcoat and is shooting fellow students while his friends cheer him on. Subject 2 also had an affinity for Stephen King novels and violent video games. While in juvenile hall awaiting trial, he commented, "People respect me now." Subject 2 pled guilty but mentally ill, and was sentenced to life in prison without the possibility of parole (Belkin, 1999).

The Criminal Opportunist. On December 14, 1993, 18-year-old subject 3 entered Chuck E Cheese's Restaurant just before closing, ordered a sandwich, and played a video game. He was a former employee and had been terminated three weeks earlier. Five employees were working, and two children and a couple were initially in the restaurant.

Subject 3 was armed with a .25 caliber Raven pistol he had acquired illegally a week before. When the children and couple left the restaurant, he shot and killed a female employee, then a male employee who was vacuuming. Another female employee recognized subject 3, who

then shot her in the head as she begged for her life on her hands and knees. He shot another male employee who was cleaning pizza pans, then entered the manager's office where the safe was located. Subject 3 shot and killed the manager after she opened the safe for him, then fled the location. Three adolescent workers and the adult store manager were dead. One adolescent employee survived his serious wounds and later testified in court.

Subject 3 took a cab to his girlfriend's house, told her what he had done, and showed her the money; they then had sex. That same day, and during the weeks prior to the mass murder, he told several of his friends about his plan to go to the restaurant and "kill them and get the money." One of his friends told him, "You don't have the balls." He told his brother, an employee of the restaurant, "Don't go to work tonight."

Subject 3 had committed several robberies of fast food restaurants in the five months prior to the mass murder, including a Burger King where he had also been employed. Each of his robberies became progressively more violent. A high school graduate from an intact home, he was a member of a loose-knit gang. After his arrest, he tried to feign mental illness for eight months by acting like a monkey and pretending he was fecally incontinent. He gave up malingering when no one paid attention to him. Subject 3 bragged to other inmates about his crimes, and gave an interview to a local television station, casually describing the homicides. He had a smoking gun tattooed on his arm and the statement, "by any means necessary."

Subject 3 was sentenced to death after his conviction on four counts of first-degree murder and one count each of attempted murder, kidnapping, and robbery. His girlfriend and his mother each pled guilty to being accessories after the fact, as they had helped him destroy evidence of his crimes.

The timing of the mass murder depended on the type: classroom avengers killed during the weekdays; family annihilators killed on Thursday, Friday, Saturday, or Sunday. The two bifurcated cases took place on Wednesday. Most single perpetrators killed between noon and 6 P.M. The vast majority of the adolescent mass murderers were captured ($n = 29$, 85%); two were killed (6%); and three committed suicide (9%).

DISCUSSION

Adolescent mass murder appears to be the exclusive domain of males—to a greater, but perhaps not significant,

degree than other violent acts. The gender disparity in criminal violence is a consistent finding that cuts across racial, ethnic, national, cultural, and socioeconomic lines (Wilson and Herrnstein, 1985). The racial distribution of our subjects appears similar to population distributions in the United States as recorded in the 1990 census (U.S. Census Bureau, 1990) but is grossly different from adolescent homicide data. In 1993 the base rate for firearm homicides among white adolescents was 12.8:100,000; among African American adolescents it was 131.5:100,000, a difference by a factor of more than 10 (FBI, 1994). We think this striking racial difference is due to the poor and urban milieu of the African American adolescent single homicides, in contrast to the largely small town and suburban middle-class milieu of adolescent mass murder. The clustering of the majority of the cases in the last 5 years of the study period may represent a "contagion" or copycat effect. There is evidence that suicides increase after publicized suicide events and that, the more publicity given to the news story, the greater the increase (Bollen and Phillips, 1982). Evidence also exists that certain types of mass media violence will trigger a brief, sharp increase in homicides (Phillips, 1983). No such standard time-series regression analysis has been done with adult or adolescent mass murders.

The quadrad of "loner" status, victimization by bullying, broken families, and violent fantasy preoccupation introduces the social dynamic of alienation from others, the possibility of a pathology of attachment, and a compensatory mode of narcissistic repair, especially among the classroom avengers. Others have suggested an attachment problem among adolescent mass murderers (McGee and DeBernardo, 1999) that, if measurable, would likely be categorized as "dismissive" (Bartholomew, 1990): the withdrawal of affect from, and devaluation of, those who are neglectful, indifferent, or, in the case of bullying, obviously cruel. Bowlby (1944) referred to these subjects as "affectionless" delinquents in his classic study of juvenile thieves. The use of compensatory narcissistic fantasy to withdraw from real objects and repair emotional wounds has been discussed extensively in the psychoanalytic literature (Kernberg, 1975; Person, 1995) and empirically explored in forensic studies (Hempel et al., 1999; Meloy, 1988, 1998).

Bullying has received increasing attention (Hoover et al., 1992; Olweus, 1994), and we note that a majority of the adolescent mass murderers were either perpetrators or victims of bullying. Our finding, however, should be tempered by the fact that *most* students report being bul-

lied at least once, and 14% of both boys and girls suffer severe trauma from bullying abuse (Hoover et al., 1992). The instigation of bullying suggests aggressive, antisocial behavior—in one study 60% of children identified as a bully in middle school had one criminal conviction by age 23 (Olweus, 1994)—whereas victimization and subsequent extreme violence theoretically suggests an emotional dynamic that may have been present in almost half our sample: the transformation of hot shame into cold anger. Shame-based rage—a response to humiliation by one or several bullies—has received attention in psychoanalytic work (Wurmser, 1981) and domestic violence research (Dutton, 1998). Our theory is that another dimension is added as a prelude to some adolescent mass murders. The adolescent victim of bullying does not lash out in rage at the time of the felt shame, perhaps because the bully is bigger and stronger, but instead withdraws into fantasy to compensate for the almost intolerable feelings of a public humiliation, the exposure of the self as weak and ineffectual.

In the context of adolescent mass murder, this compensatory fantasy may have several distinctive characteristics: it consumes an inordinate amount of time, it is violent, it contains themes of grandiosity and persecution, and it provides a vehicle for the adolescent to identify with the aggressor (A. Freud, 1936) and exercise omnipotent control over his adversaries (Meloy, 1988). This proposed identification can be inferred from our subjects' violent histories; arrest histories; preoccupations with war or weapons; and nicknames related to violence, rebellion, or aberration.

For example, the computer game "Doom" was the most commonly and repetitively played, and *Natural Born Killers* was one of the more popular movies among the subjects. In both of these instances of screen violence, the former more interactive than the latter, killing is intermittently positively reinforced (predicting its repetition), normalized, and becomes a source of sensation-seeking and excitement for the player/viewer. What we term *aggression immersion* becomes an alternative, fantasy-based world that replaces global social failure, especially for the classroom avengers.

Vulnerabilities are also apparent in these subjects. The majority used a variety of licit and illicit drugs, a risk factor for violence in general and among the mentally ill in particular (Steadman et al., 1998). A greater proportion of adolescent mass murderers than the general population sought out mental health care at least once. Depressive

symptoms were suggested in several subjects, especially the classroom avengers. Preoffense antisocial behaviors were more apparent among the family annihilators. (Although psychopathy, to our knowledge, was not directly measured in any of the subjects, the construct has been shown to be strongly related to adolescent criminality, aggression, and violence [Forth and Mailloux, 2000].) The subjects were generally not psychotic at the time of the mass murder, however, which partially explains their amenability to killing in pairs and their strong tendency to kill known victims.

These predisposing factors, however, may need a trigger to precipitate a mass murder. In our subjects, a triggering event was found in almost two thirds of the cases, usually related to a failure in love or work (school). The most common precipitant was rejection by a real or fantasized girlfriend. "Unfair" treatment by others, including one's family, suggesting another form of rejection and humiliation, was the second most common perceived insult.

Firearms were the weapons of choice for the adolescent mass murderer, providing him with the lethality to carry out the killing of three or more individuals within a few minutes. The more surprising finding is that two out of three firearms were taken from the parents' home or purchased. Although gun ownership pervades American society—there are almost as many firearms in circulation as there are people—this finding answers the question of whether access to firearms for any adolescent is too easy, especially for those very few who present risk factors for mass murder.

The average number of weapons brought to the scene (2.4) and the average number of deaths (4.7) and injuries (3.1) are empirical findings that strongly suggest an unambivalent desire to maximize casualties, usually among victims known to the adolescent. The chosen manner of death is shooting, stabbing, or bludgeoning. Adolescent mass murder is personal, and, given the absence of psychosis, the intent and motivation are grounded in real object relations, not deluded ones. The fact that one out of four adolescent mass murders were committed by two males in concert also suggests that motivation in these cases is shared and understood, if not reinforced, and is not a product of a private, idiosyncratic, or psychotic reality. The presence of pairing in these cases sharply contrasts with adult mass murderers, who almost always act alone (Hempel et al., 1999). Such sharing of emotional wounds is likely a reflection of adolescent development—to seek approval and validation from peers—and we theorize that it may lead to a shared homicidal fantasy with concomi-

tant elevations in self-esteem as the boys narcissistically mirror or idealize each other. In the seven pairings in this sample, moreover, one perpetrator was usually the dominant personality.

The psychological abstracts (Table 2) further suggest an angry desire to consciously dominate and control the victims, not a psychotic projection. A pathologically narcissistic sense of entitlement—the subject believes he has a right to kill others—is unambiguous in all these statements except for possibly, "I'm sorry."

The adolescent mass murders, like the adult mass murders (Hempel et al., 1999), were generally acts of predatory (instrumental) violence (Cornell et al., 1996; Meloy, 1997). This mode of violence is planned, purposeful, unemotional, shows an absence of autonomic arousal, and is not preceded by a real or perceived imminent threat. Evidence that most adolescent mass murder is predatory (instrumental), rather than affective (reactive), is suggested by our findings of articulated threats to third parties before the event; notes or diaries revealing violent intent; preoccupation with violent fantasies such as war or weapons; the accumulation of weapons before the event (often evolving from low-efficiency, low-powered weapons to high-efficiency, high-powered weapons); and the absence of emotion in most perpetrators during the mass murder as observed by surviving witnesses (the first case example appears to be an exception). If any emotion is apparent, it is usually pleasure or laughter, which could suggest anxiety or sadism. For example, Eric Harris and Dylan Klebold laughed during the commission of the Columbine High School mass murder (*Time*, 1999). Michael Carneal (subject 2) laughed just before he pulled a gun out of his backpack. Toby Nace, a ninth grader and friend of Carneal's, reported this observation during his deposition in a civil suit filed in McCracken County, Kentucky: "I seen him put earplugs in, and [I] say, 'Hey, it would be funny if you wore those during class while the teacher is giving a speech.' And he laughed. And then I just turned around" (Glaberson, 2000).

The predatory mode of violence is most obvious among the classroom avengers. McGee and DeBernardo (1999) came to the same conclusion: "These acts contain elements of sophistication and creativity that are totally absent from the purely impulsive acts of suddenly erupting rage and loss of control typical of affective aggression" (pp. 13–14). Predatory violence is biologically distinctive from affective (emotional, reactive) violence in mammals, is directly measured in animal experiments

(Siegel and Pott, 1988), and is inferred in psychopharmacological (Eichelman, 1992) and neuroimaging (Raine et al., 1998) studies in humans. It is evolutionarily rooted in hunting. Dodge and Coie (1987) and others (Poulin and Boivin, 2000) have used the somewhat parallel terms *reactive* and *proactive* aggression in their validation of differences in aggression among children.

The importance of this finding is that it suggests that the adolescent mass murderer is opportunistic rather than impulsive, and will not show any sudden or highly emotional warning signs. Instead, as Freud (1911) noted, the *idea* of mass murder—thought as experimental action—is likely incubated in the mind of the perpetrator, initially suffused with angry and dysphoric feelings, which are sometimes a defensive response to repeated rejection and humiliation. It could then be supported by the elaboration of compensatory narcissistic fantasies, often with a paranoid tinge, which ameliorate unpleasant emotions such as anxiety or fear. Imagined omnipotence is slowly translated into verifiable reality through careful planning and actually exists during the few moments of the mass murder. The aftermath, whether death or surrender, may be irrelevant to this experience of dominance, control, and mastery. As 16-year-old Luke Woodham—one of the bifurcated killers in this study—wrote in his manuscript, “I am not insane. I am angry. This world shit on me for the final time . . . I am not spoiled or lazy, for murder is not weak and slow-witted. Murder is gutsy and daring” (Lasseter, 1998).

Although the personality traits or disorders of the adolescent mass murderer remain largely unknown to us because of their developmental plasticity and confidentiality of records, their behaviors, like those of the adult mass murderer, suggest both odd, reclusive and dramatic acting-out developmental courses. Psychopathy is also suggested in many of these cases. It is a personality construct that facilitates predatory violence (Cornell et al., 1996) and emotional detachment (Meloy, 1988).

The data in Table 3, although they should not be considered a validation of our proposed typology, are suggestive of some differences among adolescent family annihilators, classroom avengers, and criminal opportunists. The variables suggest several trends that invite further study: Family annihilators and classroom avengers may be much more likely to consciously ponder mass murder than the criminal opportunists; classroom avengers may be the most likely victims of bullying, and therefore the most preoccupied

with compensatory fantasies; weapons preoccupation may be most prevalent among the criminal opportunists; a substance use history may be most prevalent among the family annihilators; depression may be the clinical problem that is likely to distinguish the classroom avengers from the family annihilators and the criminal opportunists; and a history of antisocial behaviors may predominate among the latter two groups.

Limitations

Our study has many limitations and should be considered only preliminary and descriptive. Our sample size is small, and we did not utilize a comparison group. Because of its archival nature, there are many missing data, and the authors did not conduct any clinical evaluations. Subjects were selected nonrandomly, and caution should be used to generalize to other individual cases of adolescent mass murder. Most psychiatric and psychological data were unavailable to us because of the rigorously protected confidentiality of minors. Most importantly, the characteristics of adolescents we have identified and described should not be used to predict mass murder, as there were no comparison or control groups. Despite these limitations, the study is the largest, most systematic gathering of data on adolescent mass murder to date, and it charts a path for further research.

Clinical Implications

Mental health professionals should consider several factors when attempting to assess risk, diagnose, or treat an adolescent when a question of violent behavior has prompted the referral: most threat cases will be false positives; diagnostic workups must include a careful assessment of both *DSM-IV* Axis I and Axis II (alcohol/drug abuse is likely); comprehensive psychological testing may be useful; collateral interviewing of family members, siblings, teachers, and peers should be done to understand the often subtle and concealed psychodynamics, such as chronically violent fantasies, that may be inferred from drawings, narratives, and comments by the subject; and treatment of an adolescent who poses a threat of violence toward others should recognize the dynamic nature of risk. Although adolescent mass murder will likely remain a very low-frequency but very-high intensity event, therefore rendering prediction virtually impossible, it is our hope that this study will inform threat assessment and guide preventive efforts in families, schools, clinics, police agencies, and communities (Mohandie, 2000).

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