Bio-Psycho-Social-Cultural: Four Domains of Factors Contributing to School Shootings

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hough it is natural to wonder, "What's wrong with school $oldsymbol{oldsymbol{oldsymbol{L}}}$ shooters?," there are no simple answers. Despite the frequent focus on bullying or violent video games as the causes of school shootings, there is no one factor that can explain mass attacks, whether at schools or elsewhere. This does not mean that bullying and violent media never play a role, but by themselves they do not cause mass murder.

School shootings constitute a complex phenomenon that involves combinations of many factors. To begin to understand the perpetrators in terms of "what's wrong with them" or "how they got this way" requires a comprehensive assessment of numerous factors. This chapter presents a range of influences that appear to contribute to the desire for, and capability of, committing school attacks.

A FOUR-DOMAIN MODEL

The factors under discussion are divided into four domains: biological, psychological, social, and cultural. Each domain will be briefly explained, along with relevant categories within the domain. It must be noted that no one factor is found in every perpetrator; a factor that is the primary driving force for one shooter's attack may be nonexistent in other shooters. Though every perpetrator is influenced by multiple factors, the particular combination of factors differs from one shooter to the next.

After an overview of the four domains, there is a section that presents the emotional consequences that result from the experiences and factors identified within the domains. The bulk of the chapter consists of brief summaries of five school shooters,

noting prominent factors from the four domains. The chapter ends with a brief discussion of the relevance of this model for threat assessment and violence prevention.

Before describing the domains, however, a few caveats are in order. First, many factors are ordinary experiences that by themselves do not predict or correlate with violence. For a particular shooter, simply being short, having poor athletic abilities, enduring a break-up, receiving a bad grade, getting suspended, or being a virgin may cause significant anguish and rage. These issues or experiences are not warning signs of violence. For someone who is an extreme outlier, however, and in combination with multiple other factors, such ordinary occurrences can contribute to their violence risk.

Second, the information that is available varies across the perpetrators. In every case there is relevant information that is missing. Thus, our knowledge of contributing factors is limited by the available information. The cases that have been chosen as examples, however, are those for which a significant amount of information could be found.

Finally, the influence of most of these factors on the perpetrators' attacks may be impossible to prove. Thus, this work involves some degree of speculation. Nonetheless, the material presented here is based on years of research into dozens of school shooters.

Biological Factors

The connection between biology and violence has been researched for years. Raine (2013) provides an excellent summary of this literature. Relevant factors include inherited traits, in

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utero exposure to toxins, physical anomalies, and more. For the purposes of this chapter, the biological domain is divided into three categories: genetics, developmental issues, and a broad category that consists of various body-related issues.

Because many aspects of our being have a genetic component, including personality, intelligence, and mental health issues, it is important to recognize the potential contribution of genetics among school shooters. The second biological category, developmental issues, includes both pre-natal and postnatal medical problems that could adversely affect a child's development.

The third category, body-related issues, is harder to summarize. The primary focus of this category is body-related factors that interfere with someone developing a positive sense of self. Because most shooters are male, this typically takes the form of damaged masculinity. Body-related issues found among school shooters include birth defects, obesity, thinness, shortness, severe acne, feeling-or being mocked-as unattractive, and so on. Body-related issues can also include injuries that cause impaired functioning and/or chronic pain (Langman, 2009b, 2015b, 2017a, 2018b).

Psychological Factors

The psychology domain is divided into three categories: psychopathic, psychotic, and traumatized (Langman, 2009a, 2009b, 2015b). These categories are not mutually exclusive. It is not unusual, particularly among adult perpetrators, to find aspects of two of the categories. It must be noted that most people in these three categories never kill anyone—as with all other factors, the psychological typology presented here includes contributing factors to the attacks, but by themselves are not predictive of violence.

Psychopathic shooters are narcissistic, entitled, callous, and sometimes sadistic. They vary in their public behavior, however. Some are abrasive and belligerent, others are charming, charismatic, and deceptive, while some exist quietly in the social margin without calling attention to themselves through either charisma or belligerence.

Psychotic perpetrators have either schizophrenia or schizotypal personality disorder, with a combination of psychotic symptoms (hallucinations, delusions, disorganized thoughts and/or behavior), eccentric behavior and beliefs, and impaired social and emotional functioning.

Unlike psychopathic and psychotic shooters, who typically come from more or less intact, stable families, traumatized shooters grow up in chronically dysfunctional families characterized by parental substance abuse, parental criminal behavior, domestic violence, and physical abuse. In addition, the perpetrators may be sexually abused in their home, a foster home, or the community. Due to their family's instability, they may experience numerous relocations among various family members as well as foster homes. These constant changes add further distress on top of their traumas.

This psychological typology sheds light on two important factors among perpetrators: their extreme reactivity and their lack of empathy for their victims. The narcissism and entitlement of psychopathic killers results in ordinary slights or setbacks assuming a greater magnitude; a taunt by a peer may be experienced as being as egregious as a peasant slapping the face of a king, resulting in corresponding rage. Psychotic shooters may perceive plots where they do not exist, or overreact to common peer interactions because they perceive events through the lens of their paranoia. Traumatized perpetrators may be hypervigilant and have poor emotional control due to their histories of victimizations.

Regarding empathy, a lack of empathy is a core feature among psychopathic attackers. Though psychotic perpetrators may be capable of empathy, the intensity of their psychotic symptoms, whether paranoid delusions or command hallucinations to kill, may override their empathy. In addition, people with schizophrenia or schizotypal personality disorder may exhibit a flattened emotional response which could further weaken their empathy. Finally, for the traumatized shooters, their repeated traumas might numb their feelings for others or result in a level of such intense rage that their empathic feelings are temporarily shut down.

Social Factors

The domain of social factors can include virtually any social experiences that cause significant distress. Not every possible social stressor can be listed-several categories, however, are described to provide an overview of the types of factors that are often found among school shooters. These include family, peers, school, and community, as well as the overarching category of losses (Langman, 2015b).

Though severe family dysfunction is covered in the psychology domain under the category of traumatized shooters, other family experiences may be factors. These include common events such as parental separation or divorce, significant conflict between parents or between parents and the student, and sibling rivalry.

A variety of peer issues may be significant. Perhaps the most common issue occurs in the arena of love, dating, and sex. This can include the break-up of a relationship, or the failure to establish a relationship or even to go on a date. Other peer stresses are found in rivalries, conflicts, and harassment or bullying. An often overlooked peer issue is perceived tacit approval or direct encouragement to commit an attack.

School issues typically fall into the categories of academic struggles and disciplinary actions. These issues sometimes have profound implications for a student's future, including the inability to get into college, join the military, or pursue their desired career path. School issues could also include athletic failures (failure to make a team, being kicked off a team, losing a big game, etc.), or other stresses related to school-based activities.

Community issues involve arrests, court appearances, and probation, as well as having stress at a job, being fired, or experiencing poverty or financial distress (current or impending).

Perpetrators often experience various kinds of losses, whether through the deaths of loved ones or when important people in their lives move away. Loss, however, can also take the form of a drop in status or the loss of a hoped-for future.

Cultural Factors

Whereas social factors are experiences that occur in the perpetrators' lives, cultural factors consist of larger forces in society that influence the shooters. For example, shooters often engage in violence immersion, living to a large extent in a world of violent media, including books, articles, films, and video games. The immersion in violent media may serve to desensitize them to violence, making it easier for them to commit their own acts of violence. The use of violent video games may also serve as rehearsal or training for their impending attacks (Langman, 2021). Having said this, however, it needs to be noted that playing a violent video game or watching a violent film do not turn people into killers.

Another aspect of violence immersion consists of affiliating with role models for violence and ideologies of power, hatred, and supremacy. These include Hitler and the Nazis, previous school shooters or other attackers, white supremacy, Satanism, and misogyny. Shooters often report being inspired by notorious figures and seek to emulate their violence. In addition, the ideologies may validate their own hatred and violent urges, as well as provide support for weak identities through a belief in the superiority of whatever group they identify with (Langman, 2015b, 2021).

Consequences of Factors

As a result of the factors in the four domains, shooters often experience a range of emotions and other reactions. They may become depressed and suicidal, frustrated and full of rage, and envious and resentful of their more successful peers. They may be victimized and desire revenge. They may also experience shame or humiliation, either because of external events such as being mocked or insulted, or internally because of their own sense of inadequacy. The ultimate consequence is the development of homicidal urges.

A common dynamic among the perpetrators is to use violence as self-enhancement or self-transformation. This often takes the form of what is called "fame-seeking" (Langman, 2017b). Because of their many life failures, setbacks, and frustrations, combined with their psychological issues, school shooters often feel devastatingly inadequate. They use violence to compensate for their own insignificance.

For example, Elliot Rodger wrote repeatedly about feeling inferior and referred to himself as pathetic, a loser, and a "kissless virgin" (Langman, 2014a). When he bought a gun, however,

he suddenly felt like an "alpha male" and pictured himself carrying out his murderous rampage as "the powerful god I am" (Rodger, 2014, pp. 113, 133).

Similarly, Chris Harper-Mercer wrote about the murderous attack by Vester Flanagan as a movement from a "nobody" to a "somebody":

So many people like him are all alone and unknown, yet when they spill a little blood, the whole world knows who they are. A man who was known by no one, is now known by everyone. His face splashed across every screen, his name across the lips of every person on the planet, all in the course of one day. Seems the more people you kill, the more you're in the limelight (Harper-Mercer, 2015, p. 1).

Four weeks after posting that passage in a blog, Harper-Mercer committed an attack at his college.

Though some shooters view their attacks in global terms and seek infamy, others exhibit no sign of fame-seeking. They may be driven by envy, resentment, shame, vengeance, paranoid delusions, or hallucinations commanding them to kill. Regardless of their nature of their motivations, however, their violence is a result of many combined factors.

CASE EXAMPLES

The following case examples are presented to illustrate the range of factors that may contribute to a school shooter's decision to commit an attack. As noted, the cases were chosen because the extent of the information available makes it possible to explore factors across the four domains. There is far more information known about the perpetrators than can be presented here. The discussion of each case constitutes a highly distilled summary. (Unless otherwise indicated, the information on Evan Ramsey, Kip Kinkel, Eric Harris, and Adam Lanza is from Langman, 2009a, 2009b, 2015b.)

Evan Ramsey: Bethel High School, 1997

Genetics may have been responsible for what Ramsey called a "family curse" for violence. A good example of this curse was his father's armed rampage when Ramsey was five years old, resulting in a ten-year prison sentence. The curse also affected Ramsey's older brother John, who had a history of criminal behavior that began at age twelve, including assault. A week before Ramsey's attack, John was arrested for armed robbery.

In addition to genetics, however, Ramsey experienced a highly traumatic life. His mother was a severe alcoholic who was often too drunk to care for her children. Whether or not she drank while pregnant with Ramsey is not known, but if he had been exposed to alcohol while in utero, he may have suffered from fetal alcohol effects. While Ramsey's father was in prison, his mother moved in with a series of abusive men. How much Ramsey and his siblings were abused by these men,

and how much they witnessed their mother's abuse, remains unknown. Because their home life was so poor, the boys were put in a succession of foster homes. In one home, Ramsey was physically and sexually abused by an older boy. Within a two or three year period, Ramsey was in ten foster homes.

In the social realm, Ramsey exhibited an explosive temper at school and racked up a dozen disciplinary actions in a one-year period. Ramsey reportedly was bullied by peers at school. At some point, he was beaten up by a boy who later became one of the victims in the attack. Though Ramsey had a girlfriend, she broke up with him and moved away, leaving him distraught. Ten days before his attack, Ramsey's father called to say he had been released from prison. Ramsey's reaction to this is not known, but he may have been terrified at the thought of perhaps having to live with his father.

Besides peer harassment being a factor, peer encouragement had a significant role in this incident. Ramsey initially intended to simply kill himself at school. Two of his friends talked him into committing murder and directed him to create a hit list of victims; they also showed him how to fire a shotgun. Without this influence, there likely would have been no attack.

Ramsey does not appear to have had role models in terms of notorious killers, but perhaps his father and brother were role models for his attack. In addition, fame-seeking was a contributing factor: "[My friend] said that my face and name would go across the world. He said I'll become famous. He said lots of people will know about me. He said I should live the fame" (Langman, 2009b, p. 115).

The primary factors in Ramsey's case include a possible genetic predisposition to violence, years of abuse and neglect, peer harassment, disciplinary actions at school, and a break-up that left him depressed and suicidal. The final ingredient was active peer encouragement to commit an attack.

Kip Kinkel: Thurston High School, 1998

The Kinkel family history was plagued by severe mental health issues. At least nine relatives from both sides of the family had been institutionalized, and thirty-seven family members had been diagnosed with, or showed signs of, mental health disorders (Swanson, 2000). One family member attacked a police officer, believing the officer was a Nazi; the officer shot and killed him. A cousin believed he was the second coming of Jesus. For an unknown reason, he built a bomb and threatened people at his job. Given a family history of people who were suicidal, homicidal, and psychotic, it is perhaps no surprise that Kinkel grew up to be suicidal, homicidal, and psychotic.

Kinkel also had developmental and body-related issues. He reportedly was slow to develop as a child and it bothered him that he was short. He repeated first grade because of physical and emotional immaturity (Swanson, 2000), and was distressed about being smaller than his peers (Bernstein, 1998).

As noted, Kinkel developed psychotic symptoms, including both auditory hallucinations and paranoid delusions. The hallucinations began when he was twelve-an unusually early onset. The voices contained both suicidal and homicidal content. Kinkel's paranoia included fears that the Chinese army would invade the United States, forcing him to defend his home against the invasion. He also thought that maybe the government had implanted a microchip in his brain and was broadcasting the voices he was hearing. Because of the stigma associated with mental health problems, Kinkel told no one about his psychotic symptoms, fearing he would be rejected and ostracized by his family and peers.

Social stresses included strained relationships with his parents, particularly his father. As mentioned, he repeated first grade, which may have been a significant blow. In third grade he was placed in special education, and in fourth grade he was diagnosed with a learning disability. Later on, he was twice suspended for aggressive behavior. The fact that both his parents were teachers may have made his school issues particularly significant. Besides his suspensions, Kinkel was caught stealing CDS from Target and was arrested for throwing rocks off an overpass at cars (Hicks, 1997). Another family dynamic was that Kinkel's older sister was a socially and academically successful student; thus, he grew up in the shadow of a sibling he could not measure up to.

In addition, Kinkel had a crush on a girl who did not return his feelings. In fact, she was going out with the star player on the football team. To make matters worse, Kinkel was on the football team but never got to play. Mr. Kinkel would criticize him and ask why he could not be more like the star player. Kinkel expressed his romantic despair: "I need help. There is one person that could help, but she won't. I need to find someone else. I think I love her, but she could never love me. I don't know why I try" (Kinkel, 2021, p. 1).

As a result of his many stresses, Kinkel became full of rage:

I am so full of rage that I feel I could snap at any moment. I think about it everyday. Blowing the school up or just taking the easy way out, and walk into a pep assembly with guns. In either case, people that are breathing will stop breathing.... I sound so pitiful. People would laugh at this if they read it. I hate being laughed at. But they won't laugh after they're scraping parts of their parents, sisters, brothers, and friends from the wall of my hate (Kinkel, 2021, p.1).

Though Kinkel did not express any ideologies of hatred, he did have role models for violence. He admired Ted Kaczynski and aspired to be the next Unabomber; in fact, Kinkel actually built explosives and detonated them in a quarry (Hicks, 1997). He also appears to have been influenced by the school shooting in Jonesboro, Arkansas, by Andrew Golden and Mitchell Johnson. Kinkel watched coverage of the attack and told a couple of friends that the attack was "cool;" he added, "somebody should do that around here" (Lieberman, 2008, p. 67). Two months later, he committed his own attack.

Kinkel's primary reason for committing his attack appears to have been the auditory hallucinations he experienced. In

addition, he experienced unrequited love, family conflict, disciplinary actions at school, and an arrest in the community. He ended up depressed and suicidal, but also full of rage, with voices telling him to kill. On top of this, his biggest role model in life seemed to be Ted Kaczynski. Taken together, it was a combustible combination.

Eric Harris: Columbine High School, 1999

Though there is no identifiable genetic factor that could explain Harris's violence, he wrote a quotation from Shakespeare in his school planner on Mother's Day: "Good wombs have born bad sons" (Jefferson County Sheriff's Office, 1999, p. 26,312). This suggests that he viewed himself as simply having been born "bad."

Harris was also born with two birth defects, including a congenital leg problem of unspecified nature, and pectus excavatum, which meant that he had a significantly sunken chest. Right on the cusp of puberty, he had two surgeries related to the pectus excavatum (ages 12 and 13). As indicated by his autopsy, the surgery was not successful. The impact of these medical problems is unknown, but because Harris grew up on military bases and aspired to be a marine, the impact of a damaged physique may have been profound.

In fact, Harris was teased by a peer for having a big head on a skinny body (Langman, 2014b). Harris complained about being picked on for being weak, and wrote that his hatred for other was rooted in a hatred of himself and his lack of confidence in his appearance and dating.

Psychologically, Harris exhibited psychopathic personality traits, including narcissism, callousness, disregard for laws and morals, and sadism. He fantasized about raping girls he knew and reveled in his thoughts of mutilating and killing people:

I want to tear a throat out with my own teeth like a pop can. I want to gut someone with my hand, to tear a head off and rip out the heart and lungs from the neck, to stab someone in the gut, shove it up to their heart, and yank the fucking blade out of their rib cage! I want to grab some weak little freshman and just tear them apart like a wolf, show them who is god. Strangle them, squish their head, bite their temples in the skull, rip off their jaw, rip off their collar bones, break their arms in half and twist them around, the lovely sounds of bones cracking and flesh ripping, ahhh ... so much to do and so little chances (Harris, 2014, p. 9).

Harris's sadistic delight in fantasizing about violence is also evident in this passage: "picture half of Denver on fire just from me and Vodka [nickname for Dylan Klebold]. Napalm on sides of skyscrapers and car garages blowing up from exploded gas tanks.... oh man that would be beautiful" (Harris, 2014, p. 7).

Harris was stunningly callous and condescending, writing repeatedly about his desire to kill most of humanity, viewing the mass of people as inferior: "Before I leave this worthless place,

I will kill who ever I deem unfit for anything at all. Especially life;" "If I could nuke the world I would, because so far I hate you all. There are probably around 10 people I wouldn't want to die;" and, "If you recall your history the Nazis came up with a "final solution" to the Jewish problem. Kill them all. Well, in case you haven't figured it out yet, I say 'кіш манкінд' no one should survive" (Harris, 2019, p. 3)

Despite his dark side, however, Harris was skilled in deception, and many people viewed him positively. The parent of a friend of his described Harris as "the perfect little gentleman" (Langman, 2009b, p. 36). When Harris was arrested for theft and assigned a probation officer, he was released from his probation early because he was viewed as such a good person. His probation officer wrote, "Really nice young man. Seems responsible and remorseful ... Prognosis: Good. Eric is a very bright young man who is likely to succeed in life" (Langman, 2021, pp. 162-3). The ability of psychopathic perpetrators to con people with their charisma needs to be kept in mind when conducting threat assessments.

Socially, Harris struggled with girls. Though he went on dates, he never had a girlfriend and never had sex-something that he tried desperately to experience. He was also rejected by every girl he asked to the prom (Harris, 2014; Langman, 2018a, 2019). In addition, though Harris's family was not poor, he repeatedly expressed envy, resentment, and violent hostility toward people who were wealthy (Harris, 2019).

At school, Harris endured some harassment; this was not severe, and he also harassed other students (Langman, 2014b). He was suspended once (along with two friends) for hacking into the school's computer network. In addition, Harris and Klebold were arrested in the community for breaking into an electrician's van and stealing equipment (Langman, 2014b).

One other peer issue is worth noting: Harris committed the attack with Dylan Klebold. Though it is unknown who first proposed the idea, their behavior during the attack clearly indicated that Harris was the leader. If the idea was Harris's to begin with, perhaps he would not have moved forward with the attack without the support of a willing accomplice.

Cultural influences include violence immersion, as was evident in Harris's obsession with the video game "Doom" and violent films, particularly "Natural Born Killers." In addition, he wrote about his "love" of the Nazis and their ideology and expressed white supremacist sentiments as well as misogyny (Harris, 2019; Langman, 2010). He also exhibited a desire for fame-seeking, writing, "I want to leave a lasting impression on the world" (Jefferson County Sheriff's Office, 1999, p. 26,343). Why was this so important that he was willing to kill and die to achieve recognition? One clue is that at the end of his journal, after pages and pages of narcissistic bluster and bravado, Harris ended his final entry by referring to himself as "the weird looking Eric KID" (Langman, 2009b, p. 29). His narcissism and fame-seeking were attempts to compensate for his profound sense of insecurity and insignificance.

Though Harris clearly displayed attributes across the four

domains, the core of the case is found in his narcissism, callousness, and sadistic pleasure in having the power to kill. This was supported by his fascination with the Nazis and their agenda of eliminating people whom they deemed unfit for life. In fact, this was how Harris framed his rampage: on the day of the attack he wore a shirt that said, "Natural selection," which was his term for getting rid of the inferior people who did not deserve to live.

If Harris's life had gone differently-if he had had a sexual relationship with a girl, for example-perhaps he would have not felt the need to kill. In fact, Harris referred to his upcoming attack, noting, "If people would give me more compliments all of this might still be avoidable" (Harris, 2014, p. 8). The fact that mere compliments might prevent mass murder indicates how fragile and precarious Harris's sense of self was. Unfortunately, his psychopathic traits combined with his desire to go down in history by committing an attack of such magnitude that the world would take notice.

Adam Lanza: Sandy Hook Elementary School,

Lanza's biological challenges began before he was born. His mother experienced health problems during the pregnancy, including hypotension and hypoglycemia. Late in the pregnancy there was a decrease in fetal movement, causing fear for his safety, so Lanza was born by Cesarean section. Then, after eight days, he stopped breathing and was rushed to a hospital. Whether he suffered any brain damage from a lack of oxygen is not known, but Lanza experienced significant developmental delays, particularly with language. He received special education services from age three through fourth grade (Office of the Child Advocate, 2014).

In fifth grade, Lanza wrote a series of bizarre short stories that contained mass murder and cannibalism (Lanza, n.d.). One of the characters states, "I love hurting children!" and "I love hurting people ... Especially children (p. 13). A character also shoots his mother in the head-the very act that Lanza carried out ten years later.

He also had severe sensory sensitivities to light and sound that posed challenges in multiple environments. As a young man, he reportedly walked with an awkward gait. He was also obsessed with being thin and at his death was six feet tall but weighed only 112 pounds (Langman, 2015a). In spite of this-or perhaps because of it-Lanza apparently wanted to think of himself as powerfully masculine. When he created an online image of himself, "The skinny and frail teenager chose to create an imposing, bulky, muscle-bound soldier dressed in desert camouflage" (Lysiak, 2013, p. 56).

Psychologically, Lanza appears to have had undiagnosed schizophrenia. Two years before his attack, he sent an email describing what apparently was his first major psychotic episode, including paranoia, and auditory and visual hallucinations:

Getting back to the subject of paranoia ... I began to "see"

many different things. Although I knew that none of it was actually real, it came as close to being real as it could for me without it being physically tangible. I heard screaming around me, and I had an overwhelming sense that there was someone dead behind me. I kept seeing silhouettes of flickering people everywhere. I felt like I had to cry (Langman, 2015a, p. 2).

The extent of his psychosis remains unknown. He did, however, exhibit other symptoms of schizophrenia, including blunted affect and poverty of speech. In addition, his sensory sensitivities to light and sound, as well as a decreased sensitivity to pain, are all known to occur in schizophrenia (Langman, 2015a; 2015b).

As a child, Lanza had episodes in which he seemed to shut down and tune out the world; these sound like incidents of catatonia.

He began having episodes that sent him into complete withdrawal. Loud noises, bright lights, or any sudden change or excitement could send him into a nonresponsive state ... "It was like he would go into a trance," one student remembered. "It was a little scary ... He just seemed vacant. Like he wasn't there" (Lysiak, 2013, p. 43)

Socially, Lanza had crippling anxiety and at times would not even speak in social situations. The woman who gave Lanza haircuts thought he was mute: "He would just sit there and not speak ... I just thought the child couldn't speak" (Murphy, 2012). As an adolescent, he increasingly withdrew from the world to such an extent that he had no close friends. His parents separated when when he was a child and he lived with his mother. For the last two years of his life, he had no contact with his father or his older brother (Office of the Child Advocate, 2014).

Lanza's sexuality remains obscure, and even he did not seem to have a grasp on it. When he was completing a questionnaire for college and had to specify his gender, he wrote on the form, "I choose not to answer" (Goldstein, 2013). Elsewhere he wrote, I'm pretty confused when it comes to my sexuality" (Lanza, 2010). He said he was attracted to 12-year-old girls who were pale and thin (Lanza, 2022), but he reportedly participated in an online forum whose topics included homosexual fantasies (Langman, 2015a). He seemed obsessed with the concept of pedophilia, but denied that he was a pedophile (Lanza, 2022). Regardless of how he understood his sexuality, he commented, "I've never voluntarily hugged anyone, and I wish I could, wish I could cuddle with someone I love" (Lanza, 2022). Unfortunately, he never had an intimate relationship with anyone.

Lanza wanted to join the marines, following in the footsteps of his uncle. His mother discouraged this, apparently to prevent his rejection. Lanza did not attempt to enlist, but was more upset about this than his mother anticipated. Lanza took classes at two institutions of higher education but never completed a degree. He struggled with his coursework to the point of crying and calling himself a loser. This was a repeat of his experiences in

elementary school when he had written "ugly" and "loser" on his hand (Office of the Child Advocate, 2014).

Lanza immersed himself in violence, including films and video games. In addition, he participated in an online forum focused on Columbine, school shooters, and mass killers. He edited Wikipedia pages on mass killers, typically adding more details regarding their weaponry. He studied mass murderers and compiled a massive spreadsheet on hundreds of killers, consisting of meticulous documentation of the details of their attacks (Lysiak, 2013).

Lanza was profoundly unhappy about being alive. He felt that being raised in human society with its social conventions and required use of language was equivalent to being raped. He ranted about "enculturation" being imposed upon him and expressed admiration for people who killed themselves (Lanza, 2022). He said, "Life is suffering and suicide is the solution" (Lanza, 2022, p. 41).

Though he was depressed and suicidal, Lanza's motivation for his attack remains obscure. He had psychotic symptoms, but what did these have to do with killing his mother and young children? He may have had paranoid fears about, or hostility toward, children, as suggested by some of his writings, but this is speculative (Langman, 2015a). Though Lanza clearly had severe deficits and ongoing struggles, why they manifested in violence toward his mother and young children is unknown.

Nikolas Cruz: Marjory Stoneman Douglas High School, 2018

Cruz was adopted at birth and never knew anyone in his biological family. Genetics appear to have contributed to Cruz's violence. His biological mother's history includes twenty-eight arrests. She assaulted someone with a tire iron and threatened to burn down a friend's home and kill her. In addition, Cruz has an older half-sister who was born compromised due to her mother's drug use. In her youth, she was twice charged with having weapons in school, including on at least one occasion, a firearm. She has been arrested seventeen times and is currently in prison for the attempted murder of a police officer. Other charges for violent behavior include elder abuse and battery on a disabled person (Miller & Nehamas, 2018).

In addition to genetics, Cruz reportedly had developmental issues due to his biological mother's substance abuse. His mother was arrested for buying crack cocaine while pregnant with him (Miller & Nehamas, 2018). She also used alcohol during the pregnancy, and one expert concluded that Cruz suffered from a fetal alcohol spectrum disorder (Spencer, 2022, September 13). As a child, Cruz had multiple developmental delays (Collaborative Educational Network, 2018).

Psychologically, Cruz fits best in the psychopathic category. From the time he was a toddler, he engaged in aggressive, defiant, disruptive, and sadistic behavior. He assaulted peers, threatened people with rape and murder, and pointed an AR-IS at his adoptive mother's head when she denied a request he had made. He also had a long history of killing and mutilating animals (Madan, 2018; Marjory Stoneman Douglas High School Public Safety Commission, 2019; n.d.). His callous personality and violent behavior are evident in the discussion of social stresses, including in the categories of family, school, peers, and community.

Cruz had significant stresses in his adoptive family. At age five, he witnessed his adoptive father's death in the family home (Spencer, 2022, August 29). Cruz's adoptive parents had also adopted his half-brother Zachary, who grew up to be physically and socially dominant over Cruz. Zachary was bigger, more respected by peers, and admitted to harassing Cruz (Cruz, 2018a). When Cruz's mother was in declining health in the year before his attack, Zachary asked him what he would do if their mother died; Cruz replied, "I'd go kill people" (Broward County Sheriff's Office, 2018, pp. 171-2). Mrs. Cruz died a few months prior to the attack. This was a profound loss for him and resulted in Cruz living with a succession of different families.

At school, Cruz struggled socially and academically and had dozens of disciplinary actions for misconduct, resulting in multiple changes in his schooling (Collaborative Educational Network, 2018). Cruz spent time in special education programs and felt self-conscious and stigmatized by this (Madan, 2018).

To provide a sense of the frequency of his misconduct, in the period from August, 2013 through January, 2014, Cruz had 28 disciplinary referrals resulting in 9 days of detention (or partial days of in-school suspension), 18 full days of in-school suspension, 18 days of out-of-school suspension, 10 days of bus suspension, and eventual expulsion from the bus. His behavior problems included insulting and/or profane language, disruptive behavior, disobedience, defiance of authority, verbal assault/threat, possession of prohibited items, vandalism, and a false fire alarm (Collaborative Educational Network, 2018). In one incident, Cruz wrote threatening statements on his homework, "including a reference to killing President Barack Obama, saying he should be 'burned alive and eaten'" (Craig, Brown, Larimer, and Balingit, 2018).

In the community, police were frequently called to his home because of his behavior. On one occasion, Cruz's mother called the police to report that he had attacked her with a vacuum hose. Other calls to the police were a result of Cruz throwing objects inside the house, Cruz and his brother fighting with each other, and Cruz shooting a neighbor's chickens with an airsoft gun (Marjory Stoneman Douglas High School Public Safety Commission, 2019).

Though Cruz established a relationship with a girl, he reacted badly when she broke up with him. He threatened to rape her and kill her and her family (Marjory Stoneman Douglas High School Public Safety Commission, 2019). He also threatened to kill her new boyfriend, whom he actually assaulted, though the other boy beat Cruz in the fight (Cruz, 2018a). Cruz began cutting himself after the break-up (Florida Department of Children and Families, 2016). The day before the attack, he told a girl he wanted her to be his Valentine (the next day

was Valentine's Day). She told him she was not interested in a romantic relationship with him (Broward County Sheriff's Office, 2018).

Cruz aspired to be an Army Ranger, but he did so poorly on the Armed Services Vocational Aptitude Battery (ASVAB) that he was discouraged from this path and concluded that he was "stupid" (Cruz, 2018a, p. 102).

In the cultural domain, Cruz was fascinated by violence and researched multiple massacres including those at Columbine, Virginia Tech, and other school shootings and mass attacks. He also did numerous online searches related to weapons and killing. In addition, Cruz was attracted to various ideologies including Nazism, white supremacy, and Satanism. He expressed hatred of Blacks, Jews, Muslims, gays, and other groups (Marjory Stoneman Douglas High School Public Safety Commission, 2019; n.d.). Cruz also exhibited fame-seeking behavior. He recorded a cell phone video in which he said, "I am nothing. I am no one. My life is nothing and meaningless.... With the power of my AR[15] you will all know who I am" (Cruz, 2018b, p. 3).

Like Eric Harris, Cruz was callous and sadistic. Unlike Harris, who generally presented well in class, Cruz had such poor impulse control and emotional lability that he was frequently disciplined. Cruz also had a genetic predisposition to violence. Cruz felt like a failure in life, viewing himself as an insignificant nobody. He was determined to make the world pay attention to him and was willing to kill to make a name for himself.

COMMENTS ON CASES

The five case examples illustrate the range of factors that may contribute to students' committing mass attacks at their schools. Each of the five thumbnail presentations contains potential contributing factors in all four domains: biological, psychological, social, and cultural. The specific nature of the factors in each domain differed, and the significance of each factor varied across the shooters, but all the perpetrators experienced a combination of many influences that put them on the path of violence.

It should be noted that the sample of cases chosen for this chapter is not necessarily representative of the population of school shooters. For example, three of the five perpetrators had received special education services-this percentage is higher than what is seen among the larger population of students who commit mass attacks (Langman, 2017c). Also, of the five perpetrators, two were psychopathic, two were psychotic, and one was traumatized. In a data set of 24 secondary school shooters, traumatized perpetrators constituted 42%, with psychopathic and psychotic each representing 29% of the sample (Langman, 2015b).

FROM CONTRIBUTING FACTORS TO INTERVENTION

Recognizing the complexity of factors that can contribute to mass violence is essential. As long as people think that school shootings are simply a result of video games or bullying, any attempts at intervention will fall woefully short. One outcome of understanding the many contributing factors is the awareness that the perpetrators do not wake up one day and suddenly become a mass attacker. The process on the pathway toward violence may build throughout their lives. This means that there are many opportunities for intervention. Knowing how many different events, traits, and issues play into school shootings allows schools to identify problem areas and introduce supports long before students pose a danger of mass violence.

In addition, being aware of the breadth of factors that contribute to violence can expand the range of threat assessments. A comprehensive threat assessment does not simply investigate a disturbing comment a student makes. A proper investigation explores the student's functioning in a global or holistic way, identifying sources of distress as well as strengths that could be utilized to get the student off the path of violence. A detailed knowledge of previous perpetrators and the many factors that contributed to their violence can guide threat assessment teams in knowing what to look for when conducting their investigations.

CONCLUSION

A thorough understanding of school shootings requires a comprehensive exploration of the many factors that may contribute to a student's desire to commit a mass attack. Through five brief case presentations, this chapter has illustrated a wide range of biological, psychological, social, and cultural influences that existed in the lives of school shooters. Further research is necessary to identify additional factors and to evaluate the interaction of influences that result in violent rampages.

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