Special Issue Article

Mass Murder in America: Trends, Characteristics, Explanations, and Policy Response

Homicide Studies
2022, Vol. 26(1) 27–46

DOI: 10.1177/10887679211043803
journals.sagepub.com/home/hsx

James Alan Fox[1] **and Jack Levin**[1]

Abstract

Mass murder, especially involving a firearm, has been a subject of increasing interest among criminologists over the past decade. Lacking an existing and reliable data resource for studying these crimes, several organizations have launched their own database initiatives with, unfortunately, little consensus on definition. As a result, there is confusion regarding the nature and trends of such events. In this paper, we rely on the Associated Press/USA Today/Northeastern University Mass Killing Database, which provides the widest coverage of incidents in the U.S. with four or more victim fatalities, regardless of location, situation, or weapon. First, we present trends in incidents and victimization of mass killings from 2006 through 2020, followed by an examination of various incident, offender, and victim characteristics, distinguishing among the major subtypes. Next, we detail a motivational typology of mass murder and identify the common contributing factors. Finally, we consider the potential effects of certain policy responses related to media coverage, mental health services, and gun restrictions on the prevalence of mass killing.

Keywords

mass murder, mass killing, mass shooting, contagion, gun laws

Mass killing, especially involving firearms, has become a hot topic for criminologists in recent years, so much so that special issues featuring relevant research were published by *Homicide Studies* in 2014, the *American* Behavioral *Scientist* in 2018, and

[1]Northeastern University, Boston, MA, USA

Corresponding Author:
James Alan Fox, Lipman Family Professor of Criminology, Law, and Public Policy, Northeastern University, 360 Huntington Avenue, Boston, MA 02115, USA.
Email: j.fox@northeastern.edu

Criminology and Public Policy in 2020. This level of attention stands in sharp contrast to the near disregard of mass murder within the discipline several decades ago, even in the wake of some high-profile incidents.

By contrast, scholars outside of the social sciences engaged in lively debates about causal factors. When Richard Speck strangled and stabbed eight nurses in Chicago in July 1966, some geneticists speculated about the possible role of an extra Y chromosome and whether the Texas drifter was a so-called "Super male" (Saxe, 1969). And after Charles Whitman fatally shot 14 victims in August 1966 from the tower at the University of Texas, neurologists considered the significance of a walnut-size tumor found in his brain during an autopsy (Prutting, 1968).

Toward the end of the last century, serial killers like Theodore Bundy and Jeffrey Dahmer drew interest from many criminologists, as well as the general public. Meanwhile, mass murder continued to be ignored by all but a few scholars, despite several devastating events—including the 1984 massacre of 21 at a California McDonald's, the 1986 fatal shooting of 14 postal workers in Oklahoma by a disgruntled letter carrier in the first of a series of similar rampage shootings that spawned the term "going postal," the 1990 torching of a New York City social club in which 87 people perished, and the shooting deaths of 23 customers at a Texas restaurant in 1991. Not only did many criminologists consider such events to be so rare that mass murder was not a suitable focus for empirical analysis, but some assumed that mental illness played a significant role, making such criminal behavior more the domain of forensic psychiatry.

The year 2012, however, became a watershed, when three major shooting sprees—at a California university, a Colorado movie theater, and a Connecticut elementary school—suddenly had criminologists and other social scientists taking notice. According to *Google Scholar*, the (approximate) number of books and articles pertaining to mass shooting increased exponentially: specifically, from 48 in the 1980s, to 266 in the 1990s, to 1,080 in the 2000s, and surging to 11,300 in the 2010s. Besides scholarship in this arena, mass shooting emerged in recent years as a funding priority at the National Institute of Justice.

Show Me the Data

With interest in the topic growing among the public, politicians and professors alike, criminologists and other social scientists were frustrated by the lack of official data on mass shootings. Some researchers looked to the FBI's Supplementary Homicide Reports (SHR) as a resource, focusing on incidents with four or more victims, consistent with the long-standing threshold for mass murder. Unfortunately, these data are quite flawed in coverage of mass killing (see Overberg et al., 2013). Many incidents, including some with large body counts, are missing from the SHR. Also, in many cases, a police department will improperly include in an incident record all victims killed or injured in the same event, making it appear as if it were a mass killing.

In the absence of a reliable resource on cases, several news organizations and academic groups attempted to build their own databases. However, because there was no

consensus on definition, the competing databases told very different stories about incidence and trend. Some databases, such as the Mother Jones initiative, focused on the narrowest set of cases (deadly mass shootings in a public place), while others, such as the project launched by Everytown for Gun Safety, included cases regardless of location or motivation. Besides differences in defining characteristics, there was also no agreement as to the minimum victim count, with thresholds for the number of victims killed ranging from three up to six.

Even more problematic, there remains disagreement as to whether the victim threshold should include all those shot or just the fatalities. Since nothing in the phrase "mass shooting" necessarily implies death, the Gun Violence Archive (GVA) adopted the definition of four or more victims shot regardless of the extent of injury, finding hundreds of incidents a year and as many as seven on the same day.

We do not mean to ignore the awful suffering that comes from gunshot wounds, but death is different. Conflating fatalities with injuries, some of which may be minor, can be terribly misleading. Nearly half of the GVA mass shootings resulted in no fatalities, and less than one-quarter involved multiple deaths. Only 7% reached the threshold of a mass killing (at least four victim fatalities).

Mass confusion arises when figures associated with the broadest notion of mass shooting are referenced when reporting on an incident of much greater severity (Fox & Levin, 2015). Unfortunately, the GVA counts of mass shootings are frequently invoked to portray horrific shootings with double-digit death counts as commonplace—the "new normal" as some contend.

News stories about mass shootings often cite GVA statistics showing more cases than days in the year as context. In May 2021, for example, the *New York Times* (see Victor & Taylor, 2021) published what was described as a "partial list" of the 13 mass shootings occurring up to that point in the year, adding that there were "many more" not included. However, the "partial list" of mass shootings was the *entire* list with four or more victims killed. The incidents not listed were the nearly 200 of lesser severity, half with no deaths. In effect, the "partial list" characterization misleadingly implied that the others were like the 13 deadliest.

Another source of confusion involves active shooter events in which a gunman is "actively engaged in killing or attempting to kill people in a populated area." Imprecise reporting on these cases can easily deceive the public, inadvertently creating panic. News stories often conflate active shooter events with mass shootings. However, most of the wannabe mass killers fail to realize their goal. Nearly half of these events result in at most one victim fatality. One-quarter involve no deaths, and some even result in no one being injured.

Epidemic or Moral Panic

To be clear, we adopt the traditional definition of mass murder: four or more killed, not including the assailant, and mass shootings as a subset of those deadly incidents that involve firearms. Moreover, we do not limit consideration just to mass shootings in public settings. Family members killed by a husband/father, for example, are just as

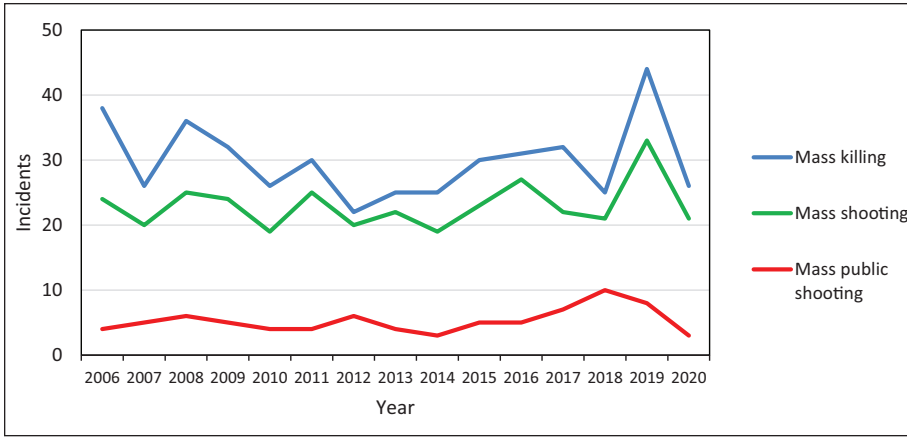

Figure 1. Trends in mass killing incidents, 2006 to 2020.

dead as victims gunned down in a restaurant or school. Although massacres in private homes do not receive anywhere near the media coverage or generate the same level of fear, these deaths matter just as much. We also include mass killings involving weapons other than firearms. Not invoking debate over gun control, these cases are relatively obscure. But, here too, the victims suffer horribly from a stabbing or bludgeoning, and their deaths are no less tragic than those from gunfire.

With the intense focus in recent years on mass shootings, all ongoing data collection efforts, except one, are restricted to mass killings by gunfire. In this paper, however, we rely on that one exception—the Associated Press/USA Today/Northeastern University database of all mass killings since 2006 with at least four victim fatalities. Over the 15 years from 2006 through 2020, there was a total of 448 mass killings, involving 567 offenders, 2,357 victims killed, and another 1,693 injured. Also, because of the special interest in shootings, particularly in public settings, we distinguish cases by weapon and type of incident.

Survey after survey have found disturbingly high levels of fear connected to mass shootings. Nearly half of Americans report being worried about falling victim to a mass shooting (Brenan, 2019), and one-third say they avoid public places because of the threat of a mass shooting (American Psychological Association, 2019). Moreover, as many as one-quarter of Americans believe that mass shootings are responsible for the most gun fatalities—more than suicide, accidental shootings, and homicides other than mass shootings (APM Research Lab, 2019).

The facts belie these concerns and perceptions, suggesting a moral panic rather than an epidemic, as some have described the situation. As shown in Figure 1, except for a short-term spike in 2019, the counts of mass killings, mass shootings, and mass public shootings have remained relatively level, at least over the past decade and a half. Over that time frame, there have been, on average, about 30 mass killings annually, two dozen of them with a gun. The number of mass shootings in public settings, the type

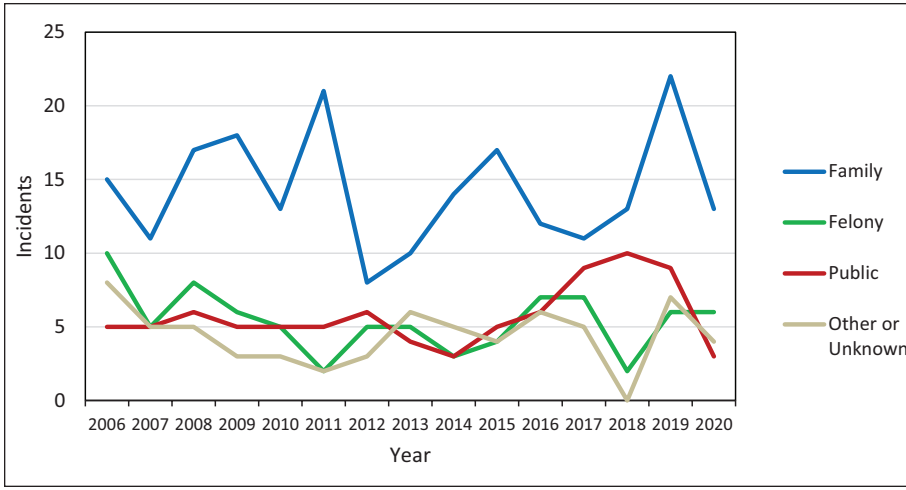

Figure 2. Trends in mass killing incidents by type, 2006 to 2020.

of event that scares people the most, has ranged from 3 in 2020 up to 10 in 2018, with an average of fewer than a half-dozen annually. Notably, the dip in 2020 occurred amidst the COVID-19 pandemic when many schools, restaurants, and other public venues were shuttered. Sadly, in the early months of 2021, with the nation moving toward a more normal way of life, the number of such incidents rebounded.

As indicated, mass killings encompass several rather distinct types of events. Figure 2 displays trends by incident type: family massacres; mass killings associated with ongoing criminal activity such as robbery, gang conflict, or drug trade; mass public killings (92% of which are shootings); and others (including some unsolved cases) fitting none of these categories. Nearly half of all cases involve family relationships and private settings, while felony-related and public massacres each contribute almost 20% of the total. In terms of trend, the annual counts have fluctuated absent any upward or downward trajectory, except for a spike in public shootings in the 2 years prior to the 2020 pandemic-associated drop.

The horror of mass killing lies, of course, in the large number of victims who lose their lives in these attacks. As shown in Figure 3, the total annual victim count remained relatively flat up until a surge in fatalities from 2016 through 2019. This spike was primarily linked to a few shootings with especially large numbers of victims killed—49 in the 2016 Pulse Nightclub shooting in Orlando; 60 at a Las Vegas concert shooting and 25 in the Sutherland Springs, Texas church rampage, both in 2017; and 23 in the 2019 massacre at an El Paso Walmart. In fact, these four shootings are half of all incidents with at least 20 victims fatally shot that have occurred in the U.S. over at least the past century. In addition to these four, five other shootings with at least 10 killed happened during the 2016 to 2019 timeframe. Together these nine shootings represent half of all attacks since 2006 with victim counts reaching double digits.

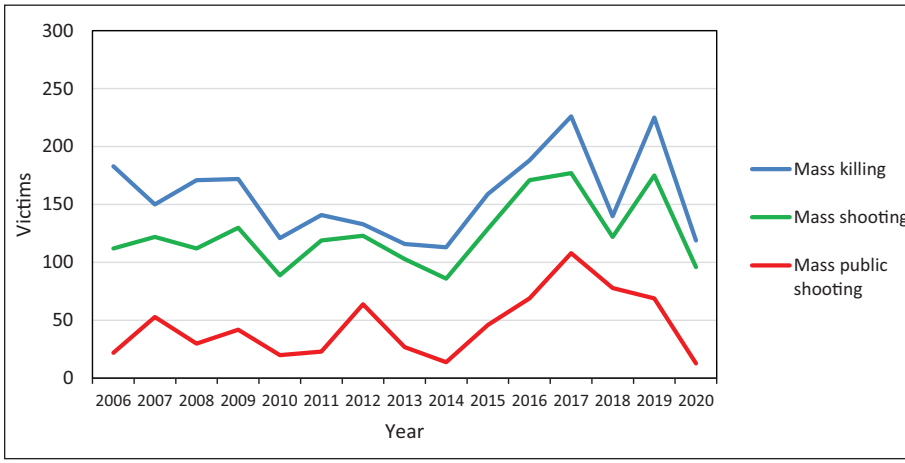

Figure 3. Trends in mass killing victims, 2006 to 2020.

Whether the recent rise in large-scale mass shootings will continue is a matter of speculation. However, using an approach previously developed to model and forecast rare catastrophic events such as earthquakes, Duwe et al. (2021) projected, under a series of assumptions about future trajectories, the likelihood of a mass public shooting at least as deadly as the 2017 Las Vegas massacre in which 60 were killed. They estimated that there is a 35% chance of such a devastating event by the year 2040.

Despite the extensive media focus and public debate about mass murder, these crimes represent a very small percentage of the nation's homicide problem. Even during the 2016 to 2019 surge in victimization, the share of homicide deaths linked to mass killings was only 1.2%, up from 0.9% over the prior decade. Whatever the future holds, it is doubtful, or at least premature, to describe the carnage from mass killing as anything close to an epidemic.

Characteristics of Incidents, Offenders, and Victims

As indicated, mass murder spans several specific types of events, distinguished by victim-offender relationship, motivation, and location. The patterns and characteristics of these incidents, those who perpetrate them, and those they target differ greatly across the major types: family killings, felony-related murders, and massacres in public settings.

The breakdowns of incident characteristics by type of mass murder are displayed in Table 1. As presented, the largest number of incidents (48% of the 448 incidents over the 15-year time frame) occurred in the family. However, the average numbers killed and injured in public incidents are much greater than those in any other type. As a substantial share, some 38% reflect indiscriminate rather than selective targeting of victims. Moreover, a relatively large pool of potential victims tends to congregate in

Table 1. Characteristics of Mass Killing Incidents.

Characteristic	Type of incident				Total
	Family	Felony	Public	Other	
Number of incidents	215	89	86	58	448
Number of victims killed					
Mean	4.55	4.48	8.37	4.47	3.26
Maximum	10	8	60	8	60
Number of victims injured					
Mean	0.42	0.73	17.38	0.74	3.78
Maximum	6	10	867	13	867
Geographic region (%)					
East	8.8	13.5	16.3	10.3	11.4
Midwest	22.3	33.7	19.8	29.3	25.0
South	47.0	32.6	32.6	37.9	40.2
West	21.9	20.2	31.4	22.4	23.4
Total	100.0	100.0	100.0	100.0	100.0
Situation (%)					
Interpersonal conflict	66.0	1.1	17.4	37.9	40.2
Despondency	19.5	0.0	3.5	5.2	10.7
Employment grievance	0.0	0.0	14.0	1.7	2.9
Profit	1.9	78.7	1.2	13.8	18.5
Indiscriminate	0.0	0.0	38.4	1.7	7.6
Gang conflict	0.0	11.2	2.3	0.0	2.7
Hate/terrorism	0.0	0.0	15.1	0.0	2.9
Other	4.7	6.7	5.8	5.2	5.4
Undetermined	7.9	2.2	2.3	34.5	9.2
Total	100.0	100.0	100.0	100.0	100.0
Location (%)					
Residence	92.6	71.9	2.3	65.5	67.6
Hotel/shelter	0.0	2.2	4.7	5.2	2.0
Commercial/retail	0.5	6.7	40.7	5.2	10.0
School/college	0.0	0.0	11.6	0.0	2.2
Government	0.0	0.0	9.3	0.0	1.8
House of worship	0.5	0.0	5.8	0.0	1.3
Vehicle	1.4	6.7	0.0	8.6	3.1
Open space	0.9	10.1	14.0	8.6	6.3
Multiple	4.2	2.2	11.6	6.9	5.6
Total	100.0	100.0	100.0	100.0	100.0
Primary weapon used (%)					
Shooting	72.6	80.9	91.9	65.5	77.0
Stabbing	10.2	5.6	1.2	5.2	6.9
Fire	6.5	5.6	4.7	19.0	7.6
Other	10.7	7.9	2.3	10.3	8.5
Total	100.0	100.0	100.0	100.0	100.0

(continued)

Table 1. (continued)

Characteristic	Type of incident				Total
	Family	Felony	Public	Other	
Type of gun* (%)					
Handgun	37.2	37.0	47.3	17.1	38.3
Rifle	7.8	7.4	28.6	5.7	13.9
Shotgun	8.1	0.7	6.4	4.3	5.8
Unknown type	12.8	28.9	2.7	32.9	14.7
Non-gun	34.1	25.9	15.0	40.0	27.3
Total	100.0	100.0	100.0	100.0	100.0

*These percentages are based on a total of 721 weapons used, including 475 guns.

schools, shopping malls, cinemas, and other public places, where they are easy to attack.

Some noteworthy patterns appear in the regional distributions of mass killings by type of incident when compared to population shares aggregated across the timeframe. The Southern states are substantially over-represented in family annihilations as compared to the population share (47.0% vs. 37.4%) and to a lesser extent compared to homicide overall. This, in part, reflects the tendency for the region to have larger families (and thus larger numbers of potential victims) and a higher prevalence of guns in the home (Schell et al., 2020). The Midwest region is over-represented in felony-associated mass killings as compared to its population figure (33.7% vs. 21.4%), which is connected to a high prevalence of these incidents in the region's large urban centers, especially Chicago and Detroit. Mass public shootings are over-represented in the West compared to its population share (31.4% vs. 23.5%); however, this is mostly linked to two states: California with 14.0% of incidents and especially Washington with 7.0% of cases (more than three times its population share).

Focusing on family massacres, which constitute nearly half of all mass killings, it is not surprising that almost all took place in a private residence and about two-thirds were motivated by some interpersonal conflict between the assailant and his or her victims. Over 70% of felony-related mass killings also occurred in private residences reflecting a large number of home invasions, many of which involved break-ins related to drug trafficking. Public mass shootings were spread over a variety of locations, however, with over 40% occurring in commercial or retail settings such as restaurants, bars, and shopping malls.

For all incident types, the majority of mass killings (77% of the total) were committed with a firearm. However, more than one-quarter of the family slayings involved weapons other than a firearm as these killings, committed in a confined space, could be carried out effectively with less lethal means, such as a stabbing or bludgeoning. Public massacres, by contrast, generally required a firearm in light of the ability that potential victims would otherwise have to escape injury or at least death. Finally, defying the popular conception about the role of assault weapons, it was handguns—38%

of the total—and not rifles or shotguns that were most likely to be used as a weapon of mass murder destruction. The wider reliance on handguns, owing to the ease of concealment compared to long guns, held even for public massacres. Of course, the handguns were sometimes equipped with a large capacity magazine, as in, for example, the April 2007 Virginia Tech shooting.

Next, Table 2 shows characteristics of the offenders by type of incident. Those who massacre their family members tend to be white (52.3%) and male (89.9%), paralleling racial/ethnic and gender patterns in the larger population of homicide offenders generally. Only in felony-related mass murders do Black (57.1%) and, to a lesser extent, Hispanic (16.4%) killers contribute significantly. Also not unlike homicide characteristics generally, felony-related mass killers tend to be young (64.3% under 30), male (95.4%), and rarely suicidal (0.5%). Also, with respect to age, given the substantial participation of husband/father killers, it makes sense that family annihilators would tend to be older than mass killers in any other setting. Indeed, almost 67% of family mass murderers were age 30 or older and more than 32% were 40 or older. In both family and public massacres, a substantial number of offenders took their own lives. Some family killers believe they can reunite spiritually with their dead victims in the hereafter. Suicidal killers in public settings typically spend weeks or months planning their attack, knowing all along that the end is in sight. Those who commit mass killings in public places tend to be young (51.2%, under 30), reflective of the age of onset for serious mental illness from which many of these assailants suffer. Moreover, if they do not take their own lives, they may be killed by the police or a bystander.

Table 3 displays age, race, sex, and relationship breakdowns for victims of mass murder, patterns largely a result of the offender characteristics displayed in Table 2. Over half of the victims of family massacres are children or adolescents, typically murdered by a parent or sibling. Females outnumber males as victims, given that the wife, ex-wife, or girlfriend is usually the primary target of a male assailant with other family members—usually children—evenly divided between the sexes. Because of the random selection of victims targeted in many felony-related massacres (18.5% strangers) and most public massacres (67.1% strangers), those unfortunate to be victimized are simply at the wrong place to be at a dangerous time. As a result, the demographic characteristics of these victims do not differ much from the general population.

A Typology of Motivations

One of the most intriguing yet often perplexing questions concerning mass murder is in determining what prompted an assailant to take so many lives. In some incidents, the motivation is complex consisting of multiple forces that are challenging to reconcile, while other attacks—especially when the offender confesses or leaves behind written or video documentation of purpose—reveal a single provocation that can be easily identified. Of the many ways one might classify these incidents, a motivation-based typology with five categories—power, revenge, loyalty, terror, and profit—is

Table 2. Characteristics of Mass Killing Offenders.

Characteristic	Type of incident				Total
	Family	Felony	Public	Other	
Number of offenders	227	185	89	65	567
Age of offender (%)					
Under 20	6.2	15.2	5.7	17.4	10.0
20–29	26.4	49.1	45.5	32.6	37.4
30–39	35.2	29.2	13.6	23.9	28.8
40–49	23.3	5.3	21.6	8.7	16.0
50+	8.8	1.2	13.6	17.4	7.9
Total	100.0	100.0	100.0	100.0	100.0
Race of offender* (%)					
White	52.3	17.1	54.4	54.3	41.8
Black	29.0	57.1	26.6	31.4	37.6
Hispanic	11.4	16.4	8.9	8.6	12.3
Asian	6.7	5.7	5.1	2.9	5.8
Other	0.5	3.6	5.1	2.9	2.5
Total	100.0	100.0	100.0	100.0	100.0
Sex of offender (%)					
Male	89.9	95.4	94.3	91.5	92.5
Female	10.1	4.6	5.7	8.5	7.5
Total	100.0	100.0	100.0	100.0	100.0
Offender suicide (%)					
No	56.8	99.5	62.2	86.3	74.5
Yes	43.2	0.5	37.8	13.7	25.5
Total	100.0	100.0	100.0	100.0	100.0

*Race information was unavailable for 21.2% of the offenders.

particularly useful. Like most typologies, of course, the categories are not mutually exclusive; some mass killings involve a mixture of motivations.

A large number of mass killings reflect a theme in which power and control are dominant. In its most extreme form, the so-called "pseudo-commando" has a passion for symbols of power, including assault weapons, and may even dress in battle fatigues in preparation for an armed assault. In November 2017, for example, Devin Patrick Kelley, a 26-year-old control freak, adorned black body armor and a skull mask bearing a logo ominously similar to that of Marvel comics "The Punisher," and carried an AR-556 rifle equipped with several militarist accessories to the First Baptist Church of Sutherland Springs, Texas, where he slaughtered 25 parishioners and wounded more than 20 others. Although his choice of target reflected several personal issues plus his disdain for religion, Kelley described himself as "the angel of death" and boasted "no one can stop me."

Some killers regard mass murder as an opportunity to go from obscurity or outright rejection to a position of importance or power, even if posthumously. They do what

Table 3. Characteristics of Mass Killing Victims.

Characteristic	Type of Incident				Total
	Family	Felony	Public	Other	
Number of victims	979	399	720	259	2,357
Age of victim (%)					
Under 10	30.4	6.6	4.3	11.8	16.4
10–19	20.2	19.6	8.8	13.3	15.9
20–29	10.5	30.0	23.0	32.2	20.0
30–39	11.6	14.2	17.8	18.0	14.6
40–49	9.5	13.7	13.2	13.7	11.8
50+	17.8	15.8	32.9	11.0	21.3
Total	100.0	100.0	100.0	100.0	100.0
Race of victim* (%)					
White	50.8	38.6	61.7	49.1	52.0
Black	24.6	37.2	11.1	30.4	23.1
Hispanic	14.5	18.3	20.2	11.6	16.6
Asian	7.3	5.9	5.5	4.9	6.3
Other	2.8	0.0	1.5	4.0	2.1
Total	100.0	100.0	100.0	100.0	100.0
Sex of victim (%)					
Male	43.7	62.2	57.5	60.2	52.9
Female	56.3	37.8	42.5	39.8	47.1
Total	100.0	100.0	100.0	100.0	100.0
Relationship of victim to offender (%)					
Intimate partner	12.7	0.3	1.1	3.1	6.0
Child	30.6	0.0	0.0	0.4	12.8
Parent	6.4	0.0	0.6	0.8	2.9
Other family	28.3	3.8	1.3	1.2	13.0
Classmate/co-worker	0.1	1.0	13.1	1.2	4.4
Friend/acquaintance	19.3	26.9	8.9	44.3	20.1
Criminal associate	0.0	9.5	1.5	1.6	2.2
First responder	0.2	2.3	3.3	0.0	1.5
Bystander/stranger	1.0	18.5	67.1	10.2	25.2
Other	0.3	7.4	1.8	1.6	2.1
Undetermined	1.0	30.3	1.4	35.7	9.8
Total	100.0	100.0	100.0	100.0	100.0

*Race information was unavailable for 9.1% of the victims.

they believe is necessary to seize the center of attention—to make the headlines, dominate the news cycle, and be deified by admirers on blogs and websites—essentially to go down in infamy. Seung-Hui Cho, whose April 2007 killing spree claimed the lives of 32 members of the Virginia Tech community sent selfies and videos to the media

that depicted him dressed as a warrior and brandishing firearms. Unfortunately, media outlets—even prominent ones—gave Cho his final wish by publishing images of him in various fearsome poses.

Many mass killers are motivated by revenge, either against specific individuals, particular categories or groups of individuals, or society at large. Most commonly, the murderer seeks to get even with people he knows—with his estranged wife and all *her* children or the boss and all *his* employees. In what Frazier (1975) termed "murder by proxy" some victims are chosen because they are identified with a primary blameworthy target. For example, in August 2010, Omar Thornton fatally shot nine co-workers and injured two others at a Connecticut beer distributor. Just prior to turning the gun on himself, Thornton called 911 to explain that his attack was in response to racist actions by the company, including his being fired for taking beer for personal consumption. He couldn't kill the company, but he could still hurt management and the business in general by executing its employees.

Some revenge-motivated mass killings are instead inspired by a grudge against an entire class of individuals—based, for example, on race, religion, gender, or sexual orientation—viewed as being responsible for the killer's difficulties in life (Levin & Nolan, 2017). Robert Bowers killed 11 worshipers at a Pittsburgh synagogue in October 2018; Dylann Roof slaughtered nine African-Americans at a Charleston, South Carolina church in June 2015; Patrick Crusius targeted Mexican-Americans in his August 2019 rampage at an El Paso Walmart resulting in 23 victim fatalities; and Elliot Rodger became an "incel hero" in May 2014 when he killed six and injured 14 others—by gunfire, stabbing and vehicle ramming—protesting years of rejection by women. These assailants may have killed indiscriminately, but not completely at random. Victims were targeted for what they were, not who they were.

The least common form of revenge killing involves an assailant who sees society in general as corrupt and unfair, even suspecting the existence of a wide-ranging conspiracy blocking success. George Hennard, Jr., for example, hated virtually everyone—minorities, immigrants, gays, Jews, and especially women. On October 16, 1991, his 35th birthday, Hennard smashed his pickup truck through the plate glass window of a crowded Luby's cafeteria in Killeen, Texas. As he methodically executed 23 and wounded many others, he shouted out, "All women of Killeen and Belton are vipers. . .This is what you've done to me!"

Mass killings for power or revenge are expressive, as they reveal profoundly held emotions or attitudes underlying the violent behavior. In contrast, the remaining forms are more instrumental in their purpose, pursuing an objective that involves loyalty, profit, or political gain.

A few mass killers are inspired by a distorted sense of love and loyalty—a desire to save their loved ones from misery and hardship. Certain family massacres involve what Frazier (1975) identified as "suicide by proxy." Typically, a husband/father is despondent over the fate of the family unit and takes not only his own life but also those closest to him to protect them from the pain and suffering. In May 1990, Hermino Elizalde, described by friends as a devoted father, was concerned that his recent job loss would allow his estranged wife to gain custody of their five children. Rather than

risk losing his beloved kids, he killed them in their sleep, and then took his own life. By killing them all, Elizalde may have reasoned they would be reunited spiritually in a better life after death. Loyalty to a street gang or a cult leader can also be implicated in mass murder. Most famously, over 900 members of the Peoples Temple, a San Francisco-based cult led by Jim Jones, perished after drinking cyanide-laced Flavorade. Although often described as mass suicide, countless adults and children were forced to drink or else shot if they refused.

Some mass killings are terrorist acts in which the perpetrators hope to "send a message" through murder. In 1969, the "Manson family" literally left the message "Death to Pigs" in blood on the wall of Sharon Tate's mansion, hoping to precipitate a race war. Shocking more in terms of magnitude than in style, the April 1995 bombing of a federal building in Oklahoma City resulted in the deaths of 168 victims, including 19 children who attended the daycare facility housed within. Orchestrated by anti-government extremists Timothy McVeigh and Terry Nichols, the bombing was designed to avenge aggressive actions by federal law enforcement and to protest U.S. foreign policy.

As indicated, the motivations for mass murder are sometimes multi-faceted. The Oklahoma City bombing, for example, combined elements of terror and revenge. The massacre of 49 at an Orlando gay nightclub in June 2016 also mystified investigators because of its complexity. Given the location, many immediately assumed that the assailant Omar Mateen was homophobic. After it was learned that Mateen himself frequented gay clubs and websites, an element of self-loathing was considered. At the same time, the gunman's radicalization and identification with ISIL also cast him as a lone wolf terrorist. Indeed, it is not surprising that acts of violence so extreme as mass murder can be fueled by a deadly compound of irritants and precipitants.

Contributors to Mass Murder

The factors that contribute to mass murder cluster into three groups: predisposers—long-term and stable preconditions that become incorporated into the killer's personality; precipitants—short-term and acute catalysts; and facilitators—situational conditions that increase the likelihood of a violent eruption but are not essential to produce that response.

Predisposers incline the mass killer to act in a violent manner, including chronic frustration and externalization of blame. Chronic frustration or goal blockage has long been regarded as an important predisposing factor in the genesis of aggressive behavior. Palmer (1960) studied 51 convicted killers, most of whom had experienced severely frustrating childhood illnesses, accidents, abuse, physical defects, isolation, and poverty. The mass murderer similarly suffers from a long history of frustration and failure, concomitant with a diminishing ability to cope, which begins early in life but continues well into adulthood (Palermo, 1997). As a result, he may also develop a condition of profound and unrelenting depression, although not necessarily at the level of psychosis. This explains why so many family annihilators are middle-aged; it takes them years to accumulate the kinds of disappointments that culminate in this kind of deep sense of frustration and despair.

Younger mass killers have also experienced repeated bouts of severe frustration and depression, especially related to school or family. For example, 20-year-old Adam Lanza, who in December 2012 killed 26 children and teachers at the Sandy Hook Elementary School, had been bullied in school, and was failing at work and school, losing his relationships with his only friend and members of his family, living in total isolation, and on the verge of ruining any contact he had with his mother, his only caretaker.

Of course, many people who suffer from frustration and depression over an extended period of time may commit suicide without physically harming anyone else. Perceiving themselves as responsible for their failures, their aggression is intropunitive. A critical condition for frustration to result in extrapunitive aggression is that the individual blames others for his personal problems (Henry & Short, 1954). Through long and difficult periods of learning, the mass killer comes to see himself never as the culprit but always as the victim behind his disappointments. More specifically, the mass murderer externalizes blame; it is invariably someone else's fault.

Given both chronic frustration and a blameful mind-set, precipitants can then trigger violent rage. In most instances, the killer experiences a sudden loss or the threat of a loss, which from his point of view is catastrophic. The loss typically involves an unwanted separation from loved ones or profound financial indebtedness, including job loss.

In December 2001, for example, 29-year-old Christian Longo murdered his wife and three young children, then stuffed their bodies into suitcases and threw them into Oregon's Alsea River. Longo was running up debt, taking out loans he could not repay, and engaging in bogus business deals. Having a taste for fine wine and cars he could not afford, killing his family gave him what he desired: a more unconstrained way of life.

Employment problems have also been found to precipitate mass killings. In February 2019, for example, 45-year-old Gary Martin killed five co-workers at the Henry Pratt Co. warehouse in Aurora, Illinois, before being shot to death by responding police. Martin was fired on the day he committed the murders after having worked for the company for 15 years. He brought a handgun to the meeting concerning his fate with the company, killing several of his victims on the spot. Martin then killed or injured others in his unsuccessful attempt to escape.

The overabundance of men among mass killers, even more than among murderers generally, may stem in part from the fact that men are more likely to suffer the kind of catastrophic losses associated with mass murder. Following a separation or divorce, it is generally the man who is ejected from the family home. He not only experiences the loss of an intimate relationship, but is cut off from his children, friends in the neighborhood, and the familiar routine and comforts of home. Furthermore, despite advances in the status of women in America, males more than females continue to define themselves in terms of their occupational role ("what they do" defines "who they are") and therefore tend more to suffer psychologically from unemployment (see Nauen, 2017).

Although not as common as the loss of a relationship or employment, certain external cues or models have also served as catalysts for mass murder. The rash of schoolyard slayings beginning with Laurie Dann's May 1988 rampage at a Winnetka, Illinois,

elementary school and ending with Patrick Purdy's January 1989 attack in Stockton, California, suggests the possibility of a "fad" element in which mass killers inspire one another. Most strikingly, James Wilson attempted to replicate Laurie Dann's actions, spraying a Greenwood, South Carolina elementary school with gunfire, killing two children. When police searched Wilson's apartment, they found the *People* magazine cover photo of Laurie Dann taped to the wall. They also learned in subsequent interviews that Wilson talked about Dann incessantly.

Perhaps the most influential as a precipitant for others was the April 1999 Columbine High School shooting in Littleton, Colorado. Not only did the two assailants kill 13 and injure many others, they inspired dozens upon dozens of plots and actual assaults targeting schools across the country. The Columbine episode is so profoundly embedded in the nation's collective psyche that "doing a Columbine" became a widely known term for threatening the security of a school.

The tendency for a mass killing to be patterned after the actions of another is not limited to the mass media or the internet. Any authority figure can potentially serve as a catalyst for extreme violence (Kelman & Hamilton, 1989). For example, members of the Charles Manson "family" and followers of cultist Jim Jones were clearly inspired to kill by their charismatic leaders. These "father figures" provided their followers with a justification for murder by making their "disciples" feel special and then convincing them that it was necessary to kill.

In rare cases, biological factors can serve as a precipitant, especially where the usual social and psychological contributors for mass murder are lacking. There are well-documented cases in which various forms of brain pathology—head traumas, epilepsy, and tumors—have apparently produced sudden and uncontrolled outbursts of violence, not consistent with the perpetrator's personality. For the most part, however, these are outliers.

Facilitators, the third class of contributors, increase both the likelihood and severity of violence. Often characterized in the popular press as "loners," many mass killers are indeed cut off from sources of comfort and guidance, from the very people who could have supported them when times got tough. Some live alone for extended periods of time. Others move great distances away from home, experiencing a sense of anomie in their new residence. They lose their sources of emotional support and psychological stability.

Anger, despair, isolation, motive, and intent may not be sufficient conditions for mass murder, that is, not without an effective weapon. It is difficult, and often impossible, to commit a massacre with a knife or hammer—such weapons are potentially destructive, but not mass destructive. Assailants like James Ruppert, who shot to death his 11 family members in 1975, and James Huberty, who slaughtered 21 at a California McDonald's in 1984, were well trained in the use of firearms and owned quite a few of them. Both were armed with loaded guns at the very time they felt angry enough to kill.

There are countless Americans who are angry, alienated and armed, but do not contemplate mass murder, much less attempt it. The factors outlined here are quite prevalent—individually and in combination—in the general population, whereas mass

murder is fortunately not. Any effort to predict such extreme acts of violence is doomed to fail because of the exceptionally low base rate of mass murder.

Copycat Crimes and Contagion

As indicated, there are instances when the actions of a mass killer whose murders are widely publicized can precipitate, at least in part, others to carry out similar assaults. The potential for such copycat behavior is especially likely if an impressionable individual identifies with the role model's situation, motivation, and justification. Indeed, there are countless cases of would-be assailants who came to admire the brazen acts of infamous murderers like Dylan Klebold and Eric Harris who perpetrated the 1999 Columbine massacre or Dylann Roof who slaughtered parishioners at a church in Charleston, South Carolina.

Concerned that extensive coverage of mass shootings can inspire copycats, some members of the news media, law enforcement, and the academic community have promoted the so-called "No Notoriety" campaign, asking that the names and images of mass shooters be afforded limited exposure, if not withheld altogether (see Lankford & Madfis, 2018). This movement received a significant boost from an often-cited statistical analysis of the temporal patterns to mass shootings in which Towers et al. (2015) concluded that incidents are temporarily contagious for nearly 2 weeks, producing an average of 0.2 to 0.3 subsequent attacks. This research, however, failed to measure the extent of media coverage actually given to various events. Indeed, not all mass shootings are well publicized, and some receive virtually no news coverage outside of the local area. In response, Fox et al. (2021) analyzed the amount of media coverage leading up to and following mass shootings, concluding the shootings clearly stimulate news coverage of such events, but that related news coverage or even mass shootings themselves do not precipitate additional incidents, at least not in the short term.

It is certainly appropriate for the news media to relay the basic facts about an assailant as it is a significant part of the story. Plus, it is more the act, not the actor, that others with a similar mindset might applaud and find inspirational. Many Americans can remember, for example, what took place at a Pittsburgh synagogue, a Parkland, Florida high school, and a university in Blacksburg, Virginia; Far fewer can recall the assailants' names or recognize their faces. Also, there are very few mass killers who could be considered iconic.

Although we do not see a blackout on mass killers' identities as reasonable or even feasible, there are occasions when the media crosses the line from news reporting to celebrity watch. Background stories detailing an assailant's relationships, hobbies, and lifestyle are superfluous, transforming an undeserving criminal into someone with whom others might identify. Similarly, publishing lengthy rants posted online by a mass killer, and characterizing it as a "manifesto," inappropriately suggests that the words and ideas are an important read.

A far better news angle, at least for not encouraging copycats, is to emphasize resilience. For example, coverage of the citizens of El Paso standing in line to donate blood in the wake of the Walmart massacre relayed the message that the assailant didn't win

in the end. Furthermore, highlighting the heroic deeds of first responders or bystanders in the face of crisis similarly offers a positive spin, one that readers and viewers prefer over disturbing and detailed reports concerning the carnage (Levin & Wiest, 2018).

The Right Policy Response for the Wrong Reason

There are two policy responses that are consistently raised in the aftermath of a widely publicized mass shooting: expanding the availability of mental health services and various forms of gun control. Both approaches have merit and are the right thing to do, but not necessarily for the reason cited for doing them.

Countless Americans can benefit from greater access to treatment for various psychological ailments, from minor to severe. However, mass murderers generally are not mentally ill. According to Brucato et al. (2021), only 11% of mass murderers (and 8% of mass shooters) exhibited symptoms of serious mental illness. Indeed, someone so confused, disoriented, or out of touch with reality would have difficulty planning, preparing for, and executing a deadly attack. More importantly, mass murderers, as indicated, tend to externalize blame for their failures, seeing themselves as the victim of injustice, not as weak or infirmed. They want fair treatment from others, not treatment in the form of counseling. If improving the mental health system is a worthy goal, then it need not be tied to mass killing. That only adds to the stigma of mental illness by conflating it with mass murder.

It is also important, of course, to keep dangerous weapons away from dangerous individuals, but that goal is easier articulated than accomplished. Most mass killers do not have a criminal record or a prior commitment to a mental health facility that would bar them under federal law from purchasing a gun from a licensed dealer (FFL). And those who are unable to buy weapons from an FFL can still find many alternative avenues for acquiring guns without a background check. For example, an examination of the 40% of mass public shooters whose criminal or psychiatric histories would classify them as prohibited purchasers under federal law were able, nonetheless, to obtain their firearms by means of a private sale from friends or family, a purchase from an online gun seller, a "ghost gun" assembled from a kit, or theft (Fox, 2021).

Prompted in large part by the spate of mass shootings in recent years, gun control advocates have pushed for a variety of changes in firearms regulations—from universal background checks to red flag laws, from bans on large capacity magazines to raising the minimum age for purchasing firearms. Many of these worthy proposals can potentially reduce the prevalence of homicide and suicide in this country, but whether they would affect the most extreme forms of gun violence is questionable, at best. Mass killers are typically quite determined to carry out their intended attack. Certain changes in gun laws may make it more challenging for them to acquire deadly weapons, but most would likely find a way.

A scientific review of empirical studies on the effectiveness of nine different gun control policies on the incidence of mass shootings found the evidence to be inconclusive (see Smart et al., 2020). The low rate of occurrence of mass shootings along with the wide array of contaminating factors make it difficult to isolate the impact of any

particular change in gun restrictions. Of course, inconclusive effects do not mean no effects. Although not easily measured, any reasonable policy measure that reduces the scourge of mass murder is desirable, however modest that impact may be.

Avenues for Future Research

As indicated, there has been a significant acceleration of research in recent years related to mass murder, especially massacres carried out with firearms. This expansion in scholarly effort has centered heavily on the impact of gun policies as well as the role of mental illness. Although the final word on these matters has not been established, there are some additional areas that future research might explore.

In the wake of the 2018 mass shooting at the Marjory Stoneman Douglas High School in Parkland, Florida, dozens of states responded by enacting various Extreme Risk Protection Order (ERPO) laws—or "Red Flag Laws," as they are often called. Prior research on the effectiveness of these provisions for temporarily taking guns away from individuals deemed to be dangerous to themselves or others has focused almost exclusively on suicide prevention. Given that the primary impetus for passing ERPO laws has involved the potential for homicide—and mass shootings in particular, it would be important to evaluate the impact of gun confiscation measures, including making recommendations on how best to proceed without inadvertently precipitating a violent response to such actions (see Wintemute et al., 2019).

Whereas ERPO laws are designed as a preventive move in the face of specific threats against family members or co-workers, there is growing concern for individuals whose animus is more generalized against others based on their race/ethnicity, religion, gender, gender identity, or disability status. Research is needed to identify optimal strategies and settings that will encourage members of society to interact cooperatively with others who are different (Levin & Nolan, 2017).

Although the high rate of gun ownership in the United States is often cited as a major factor in explaining the scourge of mass shootings, future research should address other characteristics of American society that contribute to the carnage. In comparison with citizens of other nations, Americans are especially prone to social isolation, a key factor in many mass killings. According to the U.S. Census Bureau (2019), the percentage of single-person households, now approaching 30%, has nearly doubled over the past half century. The trajectory in social isolation in American life has even been characterized as an "epidemic" (see U.S. Health Resources & Services Administration, 2019). Thus, research should explore strategies that can provide support to those for whom loneliness is their constant companion.

Americans' level of confidence in traditional institutions has declined precipitously in recent years (Brenan, 2021), and distrust of these institutions has become a powerful motivator for some who seek vengeance through extreme violence. Future research should, therefore, examine ways to improve the credibility of our mainstream organizations and practices (e.g., Congress, the mass media, big business, the police and the courts) so that disgruntled Americans no longer see a need to go to the margins of society—to forms of violent extremism—for solutions to their problems (Brenan, 2021).

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

ORCID iD


James Alan Fox https://orcid.org/0000-0002-7406-7895

References

American Psychological Association. (2019, August 15). *One-third of US adults say fear of mass shootings prevents them from going to certain places or events*. Author. https://www.apa.org/news/press/releases/2019/08/fear-mass-shooting

APM Research Lab. (2019, October 2). *Knowledge of gun-related deaths*. Author. https://www.apmresearchlab.org/gun-survey-deaths

Brenan, M. (2019, September 10). *Nearly half in U.S. fear being the victim of a mass shooting*. https://news.gallup.com/poll/266681/nearly-half-fear-victim-mass-shooting.aspx

Brenan, M. (2021, July 14). *Americans' confidence in major U.S. institutions dips*. https://news.gallup.com/poll/352316/americans-confidence-major-institutions-dips.aspx

Brucato, G., Appelbaum, P. S., Hesson, H., Shea, E. A., Dishy, G., Lee, K., Pia, T., Syed, F., Villalobos, A., Wall, M. M., Lieberman, J. A., & Girgis, R. R. (2021). Psychotic symptoms in mass shootings v. mass murders not involving firearms: findings from the Columbia mass murder database. *Psychological Medicine*. Advance online publication. https://doi.org/10.1017/s0033291721000076

Duwe, G., Sanders, N. E., Rocque, M., & Fox, J. A. (2021). Forecasting the severity of mass public shootings in the United States. *Journal of Quantitative Criminology*. Advance online publication. https://doi.org/10.1007/s10940-021-09499-5

Fox, J. A. (2021, April 16). *Testimony in Joe Holcombe, et al. v. United States*. U.S. District Court for the Western District of Texas.

Fox, J. A., & Levin, J. (2015). Mass confusion concerning mass murder. *The Criminologist*, *40*(1), 8–11.

Fox, J. A., Sanders, N. E., Fridel, E. E., Duwe, G., & Rocque, M. (2021). The contagion of mass shootings: The interdependence of large-scale massacres and mass media coverage. *Statistics and Public Policy*, *8*, 53–66. https://doi.org/10.1080/2330443x.2021.1932645

Frazier, S. H. (1975). Violence and social impact. In J. C. Schoolar & C. M. Gaitz (Eds.), *Research and the psychiatric patient* (pp. 191-200). Brunner/Mazel.

Henry, A. F., & Short, J. F. (1954). *Suicide and homicide: Some economic, sociological and psychological aspects of aggression*. Free Press.

Kelman, H. C., & Hamilton, V. L. (1989). *Crimes of obedience: Toward a social psychology of authority and responsibility*. Yale University Press.

Lankford, A., & Madfis, E. (2018). Don't name them, don't show them, but report everything else: A pragmatic proposal for denying mass killers the attention they seek and deterring future offenders. *American Behavioral Scientist*, *62*(2), 260–279.

Levin, J., & Nolan, J. (2017). *The violence of hate*. Rowman and Littlefield.
Levin, J., & Wiest, J. B. (2018). Covering mass murder: An experimental examination of the effect of news focus—killer, victim, or hero—on reader interest. *American Behavioral Scientist*, *62*(2), 181–194.
Nauen, R. (2017, February 24). Men vs. women: How gender can impact career aspirations. *Career Builder*. https://www.careerbuilder.com/advice/gender-impact-career-aspirations
Overberg, P., Upton, J., & Hoyer, M. (2013, December 3). USA Today research reveals flaws in mass-killing data. *USA Today*. https://www.usatoday.com/story/news/nation/2013/12/03/fbi-mass-killing-data-inaccurate/3666953/
Palermo, G. B. (1997). The berserk syndrome:A review of mass murder. *Aggression and Violent Behavior*, *2*(1), 1–8.
Palmer, S. (1960). Frustration, aggression, and murder. *Journal of Abnormal and Social Psychology*, *60*(3), 430–432.
Prutting, J. M. (1968). Symposium on medical progress and the postmortem. *Bulletin of the New York Academy of Medicine*, *44*(7), 793–798.
Saxe, D. B. (1969). Psychiatry, Sociopathy and the XYY Chromosome Syndrome. *Tulsa Law Review*, *6*, 243.
Schell, T. L., Peterson, S., Vegetabile, B. G., Scherling, A., Smart, R., & Morral, A. R. (2020). *State-level estimates of household firearm ownership*. RAND Corporation. https://www.rand.org/pubs/tools/TL354.html
Smart, R., Morral Smucker, S., Cherney, S., Schell Peterson, S., & Gresenz, A. R. (2020). *The science of gun policy: A critical synthesis of research evidence on the effects of gun policies in the United States* (2nd ed.). RAND Corporation. https://www.rand.org/pubs/research_reports/RR2088-1
Towers, S., Gomez-Lievano, A., Khan, M., Mubayi, A., & Castillo-Chavez, C. (2015). Contagion in mass killings and school shootings. *PLoS One*, *10*(7), e0117259.
U.S. Census Bureau. (2019). *Current population survey, Annual social and economic supplements, 1969 to 2019*. https://www.census.gov/library/visualizations/2019/comm/one-person-households.html
U.S. Health Resources & Services Administration. (2019, January 17). *The loneliness epidemic*. https://www.hrsa.gov/enews/past-issues/2019/january-17/loneliness-epidemic
Victor, D., & Taylor, D. B. (2021, May 10). A partial list of mass shootings in the United States in 2021. *The New York Times*. https://www.nytimes.com/article/mass-shootings-2021.html?smid=em-share
Wintemute, G. J., Pear, V. A., Schleimer, J. P., Pallin, R., Sohl, S., Kravitz-Wirtz, N., & Tomsich, E. A. (2019). Extreme risk protection orders intended to prevent mass shootings: A case series. *Annals of Internal Medicine*, *171*(9), 655–658.

Author Biographies

James Alan Fox is the Lipman Family Professor of Criminology, Law, and Public Policy at Northeastern University. He has published extensively in the area of multiple homicide, and is one of the principals in maintaining the Associated Press/USA Today/Northeastern University Mass Killing Database.

Jack Levin is professor emeritus of sociology and criminology and co-director of the Brudnick Center on Violence and Conflict at Northeastern University. He has published 33 books and hundreds of articles, chapters, and columns on a wide range of topics including mass and serial murder, hate crimes, and prejudice.