

NEWS COVERAGE OF MASS-MURDER IN THE UNITED STATES: 2004-2018

By

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A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

Criminal Justice – Doctor of Philosophy

2023

ABSTRACT

Mass murders – events in which multiple individuals are killed at one time – can receive extraordinary amounts of coverage in the news, shaping public understanding of crime and demands for policy change. Despite this deluge of coverage, the literature on media coverage of crime has not attended to mass-murder; much of our knowledge on news coverage of crime is based on single-victim homicides. This dissertation engages in a multi-method examination of elite newspaper coverage of US mass-murders from 2004-2018 to begin filling this gap. Utilizing a novel open-source database of 435 mass-murders and a collection of over 9,000 articles from seven nationally circulating newspapers, this dissertation investigates correlates of coverage and the sources journalists use in their reporting on these events. Findings indicate that most mass-murders are subject processes of routinization that result in patterns of coverage similar to single-victim homicide reporting. Only a small number of truly ‘exceptional’ events are not subject to these patterns – allowing for a greater diversity of story frames and voices to be represented. Implications for the field – including our understanding of crime reporting, methodological advancements, and areas for future research – draw this dissertation into discussion with the larger literature.

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CHAPTER 1: INTRODUCTION

News – whether it be in the form of an article in a newspaper or magazine, television segment, or story on a smartphone app – is the product of decisions made by people. Every day, journalists and their editors must decide “which events, issues, and individuals will be attended to, what resources will be allocated to their coverage, what aspects of an event or issue will be the focal point, which plotlines will be followed, which characters will be promoted” and so on (Monahan, 2010, p.4). When reporting on crime, news organizations overwhelmingly choose to spotlight the most violent - and thus least common - examples, glossing over the more frequent but less exciting petty, nonviolent, and white-collar offenses (Barak, 1994; Garofalo, 1981). The public is presented with a vision of injury and death that can strike anyone at any time.

If there is a hierarchy of violent crime in media, at the top sits mass murder—events in which multiple individuals are killed at one time. While these events have a higher likelihood of being covered in the news due to the sheer number of victims (Chermak, 1994; Chermak & Chapman, 2007; Garafalo, 1981; Sorenson et al., 1998) there remains a significant amount of variation in the attention paid to these crimes. Some mass murders will never be covered in news outlets, let alone on the national stage. Others, like mass shootings in Aurora, CO or Parkland, FL come to dominate the news cycle for weeks. This project seeks to understand this variation: what makes one mass-murder more newsworthy than another?

This dissertation also examines how 21st century technology is changing the sources of information available to journalists reporting on mass-murder events. Historically, crime reporters are mostly dependent on law enforcement and government officials to provide them the information they need to write about crime events. However, this balance may be shifting as social media allows journalists and the world at large to receive instant updates about unfolding

crises. The second half of this dissertation explores this question: have law enforcement agencies maintained control of the news narrative, or are alternative sources of information gaining greater prevalence in reporting on mass murder? If there has been a shift in sources within the coverage, has it impacted how mass murder is presented in the news?

Why study mass murder?

Prevalence of mass-murder victimization

Mass murder is an incredibly rare event. While mass murder rates are historically correlated with the overall US homicide rate throughout the 20th century, with waves recorded in the 1920s-30s and from the late 1960s through the early 1990s, the mass-murder rate never rose beyond a high of .015 per 100,000 people (Duwe, 2004). This is in stark contrast to the 10.2 homicides per 100,000 documented at the height of the 1980s crime wave (Blumstein & Rosenfeld, 1998; Duwe, 2004). Even following the height of the crime surge, comparisons of mass murder and overall homicide rates are in different orders of magnitude: by 1999 the mass-murder rate had dropped to .01/100,000 (Duwe, 2004) and the overall homicide rate to 5.7/100,000 (UCR, 1999).

The prevalence of mass murder in the 21st century, like all violent crime, has remained low. Approximately 30 incidents occur annually, two-thirds of which are committed with a firearm (Fox & Levin, 1998; Krouse & Richardson, 2015). While the average number of events per year has not changed, the number of individuals killed in mass-murder events has increased in the past decade, largely driven by a few high-fatality killings (Duwe, 2004; Fox & Levin, 1998). In addition, the proportion of mass public shootings - incidents in which offenders indiscriminately open fire in public venues with the goal of causing maximum damage – has steadily increased since the 1970s (Fox & Levin, 1998; Krouse & Richardson, 2015).

The rarity of these events does not diminish the grief experienced by victims' families, survivors, and the community. As explored in the next section, mass-murders are exceptional in the psychological effects observed among survivors and community members, resulting in an uncounted number of secondary victims. Recent mass public shootings and large-scale cases have attracted the attention of the public, claims-makers, and academics alike. Thus, these events also have a disproportionate impact on US public policy and attitudes towards firearms in comparison to other gun crimes.

Mass Murder Impacts on Communities

Psychological research demonstrates that mass-murder has a high rate of secondary traumatization, impacting individuals who may not have directly experienced the incident. In one study, 28% of female Virginia Tech shooting survivors who participated in an assessment two months after the shooting ($N=298$) scored above the clinical cutoff for PTSD and 19% scored above the cutoff for depression (Littleton et al., 2011). None of the Virginia Tech participants reported seeing the gunman or being fired upon. Of 182 adult survivors of the Oklahoma City bombing, 34.3% met the clinical threshold for PTSD six months following the event (North et al., 1999). While these are two high-fatality examples, the psychological impact appears to hold across other events. In a review of studies examining the impacts of mass shootings, 10 - 36% of witnesses were diagnosed with post-disaster psychological disturbance, primarily PTSD (Norris, 2007). In longitudinal studies, these effects persisted over time (Norris, 2007).

While the strongest psychological effects are observed among individuals who were at the scene of a mass-murder event, the larger community in which these incidents take place is also impacted. Mass murders, given the number of lives they touch, are not only individual tragedies but public ones. Thus, the affected community frequently experiences a collective grief

and distress (Hawdon & Ryan, 2011; Kropf & Jones, 2014; Wayment & Cohen Silver, 2018). The intrusion of outsiders – law enforcement, media, curious onlookers – and the intense scrutiny that follows when a mass-murder gains national attention can enhance the sense of loss (Kropf & Jones, 2014; Norris, 2007). This research demonstrates that mass-murder events not only affect the immediate victims and family members but ripple outward to impact the communities in which the events took place. To understand how these events may affect society outside the immediate community, we need to turn to the literature examining policy attitudes and policy change.

Mass Murder Impacts on Policy

With the increased societal attention paid to public mass shootings, researchers have examined the causal relationship between these events and changes to public policy. As noted by Bowers et al. (2010), mass shootings create a “direct and severe sense of panic” that can focus the attention of the public and lawmakers, creating an impetus for action. The actions that are taken, however, vary according to pre-existing ideological beliefs and attitudes around gun ownership.

For example, Luca et al. (2020) examined the relationship between mass shootings and state-level gun policy from 1989-2014. They found that a single mass shooting was associated with a 15% increase in the number of firearm bills introduced in the legislature the following year. However, this effect was mediated by what party was controlled by the legislature, the association strongest in Republican-controlled legislatures. In Republican controlled states, a mass shooting was associated with a doubling in the number of laws enacted that *loosened* gun restrictions (Luca et al., 2020). There was no significant effect on laws enacted in Democrat-controlled states and no effect on laws that tightened restrictions (Luca et al., 2020).

Scholars have also identified a connection between mass public shootings and individual attitudes regarding gun policy. In a survey administered two months after the 2017 Las Vegas mass shooting and one month following the Sutherland Springs mass shooting, two-thirds of respondents ($N=1,000$) responded in support of gun control measures (Haner et al., 2019). More methodologically significant was a survey administered to gun and non-gun owners before and after the 2016 Orlando Pulse Nightclub shooting. Non-owners showed an increase in support for stricter laws on gun sales and a decrease in positive attitudes towards gun ownership following the shooting (Stroebe et al., 2017). In contrast, gun owners' personal attitudes and intentions to purchase a gun decreased, but their support for gun control policy did not shift (Stroebe et al., 2017). These attitudes may influence subsequent behavior: a study of gun background check applications found that high media coverage of a mass shooting was associated with an increase in handgun permits (Liu & Wiebe, 2019). These studies demonstrate that mass shootings have a significant impact on the larger national conversation surrounding gun violence in the United States.

State of the Research

Mass Murders

As noted previously, current research on mass murder has largely focused on mass public shootings. In an examination of 74 peer-reviewed articles on mass shootings published between 1999 and 2018, Kim et al., (2021) criticized most studies for being atheoretical and failing to define 'mass-shooting'. This lack of a definition, let alone a shared one, disallows comparison across the literature and has resulted in disagreement in the field about the prevalence of these events. The definitional dispute is not unique to academia: in 2012, Congress defined *mass killings* to mean "3 or more killings in a single incident," directly in conflict with the FBI's

Crime Classification Manual definition of *mass murder* as “four or more victims slain in, in one event, in one location” (Krouse & Richardson, 2015). The FBI has updated its definition to incorporate killings that result in four or more victims across multiple locations within a specified time frame, thus expanding the number of included events (Krouse & Richardson, 2015). Given these multiple, conflicting definitions, even government agencies can contradict one another regarding the prevalence of mass-murder.

In the absence of a national data source documenting mass murders, news organizations, NGOs, and academics have created several open-source databases that seek to track these events. Mass shootings are documented by *Mother Jones*, the *Gun Violence Archive*, *RAND*, the *Washington Post*, Northwestern University, and many more organizations using different inclusion criteria and coding schemes. Some databases exclude gang-related killings and robberies “even though their victims are every bit as dead as those individuals whose lives are taken while shopping, sitting in a classroom or going to a cinema” (Fox & Levin, 1998: pg. 9). Mass-shooting databases exclude the one-third of mass-murders committed without a firearm. Finally, several databases – including those that document mass murders committed without a firearm – have not been updated to account for events in the past two decades (Duwe, 2004; Duwe, 2007; Huff-Corzine et al., 2014).

Differences in inclusion criteria continue to produce drastic differences in estimated annual statistics. Booty et al. (2019) compared three mass shooting databases – the *Gun Violence Archive*, *Mother Jones*, and *Everytown for Gun Safety* with reports in the FBI Supplementary Homicide Report. In 2017, the count of the number of mass-shooting incidents ranged from a high of 346 (*Gun Violence Archive*) to a low of 11 (*Mother Jones*). Remarkably, the authors could only identify 2 events that were recorded among all four data sources (Booty et al., 2019).

The disparities in inclusion criteria have trickle-down effects, resulting in differing images of who is a ‘typical’ offender, victim, and targeted location.

For all the problems with mass-shooting research, we know significantly less about the 1/3 of mass-murders committed without a firearm, incidents carried out in the home, and mass murders carried out as part of an antecedent crime. This dissertation will enhance our knowledge of the prevalence and characteristics of mass murder events – public mass shooting and otherwise – in the 21st century through the development of a database that includes these incidents from 2004-2018 (15-year period).

Media Research

Most Americans will never be victimized by violent crime; their primary source of information about the phenomenon comes from news media (Baranauskas & Drakulich, 2018; Chermak, 1994). Thus, the decisions news organizations make to systematically cover some events over others or prioritize sources of information over others can significantly shape public opinion, demands for policy change, and cultural values (Barak, 1994; Gamson & Modigliani, 1989). Understanding which mass-murder events news organizations cover and the sources of information they use to depict these events can further explain the relationship between these incidents and the changes in policy attitudes documented by researchers.

In contrast to the research on mass-murder, there is a substantial body of literature exploring how news media covers crime events. Researchers have examined the newsworthiness of different types of offenses (Garofalo, 1981; Lotz, 1991; Wong & Harraway, 2020), coverage in different medium (Bjornstrom et al., 2010; Chermak, 1995; Liska & Baccaglini, 1990), and across regions (Chermak & Chapman, 2007; Johnstone et al., 1994; Kilde et al., 1997; Paulsen, 2003) in the United States. We know how law enforcement sources act as a gatekeeper for crime

news, shaping the image of their institutions and limiting the policy solutions presented to the public (Barak, 1994; Chermak, 1995). Qualitative researchers have dug into the content of these news stories to examine the disparate presentation of victims and offenders based on race, gender, and socioeconomic status (DiBennardo, 2018; McKenna et al., 2012; Peelo, 2006). One counterintuitive finding from this body of research is that most crime news is routinized, recurrent, and often a mundane aspect of overall media coverage (Chermak, 1994; Katz, 1987; Kilde, 1997; Lotz, 1991).

Mass-murder events, however, often become ‘celebrated cases’ (Chermak, 2002) or ‘what-a-stories’ (Berkowitz, 1992), attracting a greater share of both media organization’s resources and public attention. These high-profile events, generating days of coverage across major media outlets, have a significantly stronger impact on the public consciousness than the daily grind of robberies, assaults, and single-victim homicides (Chermak, McGarrell, and Gruenewald, 2006; Innes, 2013; Monahan, 2010). Thus, understanding media coverage of mass-murder provides insight into major inflection points in the national dialogue around crime and violence.

There is a small but growing body of research examining US news coverage of mass shootings in the 21st century. This literature is beginning to identify several factors correlated with increased news coverage, including increased fatality count and characteristics of the offender (Fox et al., 2020; Maguire et al., 2002; Schildkraut et al., 2018; Silva & Cappellan, 2018;). Some researchers have also investigated the framing of individual mass-shooting events. For example, an examination of Columbine shooting news coverage found that the offenders were depicted as ‘sick’ and deviant (Consalvo, 2003). Comparison across mass-shooting events has identified several causal frames including mental illness, gang violence, and gun prevalence,

among others (Duwe, 2007; Duxbury et al., 2018; Schildkraut et al., 2020). Much of this qualitative work has taken a case-study approach, examining coverage of a single mass shooting event.

As with the research examining the causes and prevalence of mass-murder, it is difficult to compare findings across studies examining media coverage of mass-shootings. The generalizability of this research is necessarily limited by decisions to examine coverage of only one event or coverage in one news outlet. In addition, the exclusive focus on public mass shootings restricts variation, limiting the ability of researchers to identify how weapon type, location (public vs private), and victim relationships may impact coverage decisions. This dissertation will address these limitations by examining coverage of the total population of mass-murder events from a 15-year period across several news outlets, increasing the generalizability of findings.

Contributions

While mass-murders have a significant impact on survivors, communities, and public policy, social scientists know relatively little about the nature of these events and the information that is distributed to the public through the news. This dissertation will significantly increase our knowledge of mass murder and how these events are covered in the national news media by studying (1) the prevalence and characteristics of mass murder incidents committed during a fifteen-year period from 2004-2018, (2) the correlates of mass-murder news coverage, and (3) sources of information cited in news stories on mass murder.

In addition to these substantive contributions, I seek to establish several methodological best-practices for media-crime researchers moving forward. These include collecting news content from across seven major U.S. newspapers: three with a national focus and a regional

paper from each census region to account for locational bias; engaging in rigorous data collection and validation of the population of mass-murder events used for analysis; and ensuring that the event data temporally matches the news content it is being compared with. Each of these decisions represent significant improvements upon existing practice that impact the validity and reliability of findings.

CHAPTER 2: LITERATURE REVIEW

Chapter Two provides an overview of the literature and introduces the research questions that will be investigated in this dissertation. I begin by exploring the conceptual definition of mass murder before turning to a review of the research on media coverage of crime. Next, I consider theories of routinization from the field of journalism and communications. Finally, I examine the role of sources in crime reporting and conclude with a note on the social construction of news.

Mass Murder

Researchers define *mass murder* as a homicide event in which multiple victims (typically a minimum of three or four) are killed by one or more offenders (Duwe, 2007; FBI, 2005). Most definitions of mass murder stipulate that the victims must be killed within a 24 - 48 hour period (Dietz, 1986; Duwe, 2007; Holmes & Holmes, 2001; Huff-Corzine et al., 2014). Thus, mass murder is conceptually distinct from spree and serial murders, which require temporal separation between the killing of multiple victims (Dowden, 2005). There is less agreement about the matter of location – some researchers emphasize that mass murders must take place in one location or locations geographically near each other (Homes & Holmes, 2001; Huff-Corzine et al., 2014), others regard the number of victims and time as the only salient factors and do not include distance traveled by the offender to kill their victims as a relevant inclusion criteria (Dietz, 1986; Duwe, 2007).

In a report prepared for Congress, Krouse & Richardson (2015) of the Congressional Research Service systematically reviewed scholarly, law enforcement, and legal definitions of mass murder over time. The authors document that, as previously discussed, a lack of common definition of mass murder and its operationalization has resulted in large variation in findings

across research groups. Based on their review of the literature, Krouse & Richardson (2015) propose mass murder be defined as: “a multiple homicide incident in which four or more victims are murdered—not including the offender(s)—within one event, and in one or more geographical locations relatively near one another” (p 25). Given that this definition was formed after reviewing and synthesizing the existing literature, I adopt this definition for this dissertation. Operationalization of the mass-murder definition will be discussed in Chapter Three.

As research into mass murder has developed, the field has become conceptually more complicated. Many researchers exclude from analysis mass murders that are the result of organized crime, including gang activity (Fox & Levin, 1998; Gil et al., 2017); others do not include mass murders that are ideologically motivated (Gill et al., 2017). The field has also splintered to examine sub-categories of mass murder, focusing on mass shootings, mass murders at school, or solo offenders (Fox & DeLateur, 2014; Gil et al., 2017; Meloy et al., 2001). Theorists have developed various typologies of offenders and typologies of their motives, resulting in a further narrowing in to examine ‘family annihilators’ and ‘disciple killers’ (Dietz, 1986; Homes & Holmes, 2001; Fox & DeLateur, 2014).

This fragmentation of the mass murder concept into sub-categories belies the fact that multiple homicide is an exceedingly rare phenomenon. In an examination of the FBI’s Supplementary Homicide Reports from 1900-1999, Duwe (2007) identified 909 events in which 4 or more individuals were murdered. An examination of the SHR from 2001 to 2010 identified 298 homicide events with 4 or more victims, not including the offender(s) (Huff-Corzine et al., 2013). The average American’s risk of victimization is incredibly low, and individuals are unlikely to know anyone who has been witness to or been killed in a mass murder event.

Media Coverage of Mass Murder

Despite the rarity of mass murder, these events can receive a spectacular amount of coverage in the news media. Some multiple homicides so dominate the news cycle that the city in which they occurred becomes a shorthand for the event—Orlando, San Bernardino, Newtown, Aurora. The *New York Times* ran eight front page stories about the Columbine High School shooting in the first four days following the event (Leavy & Maloney, 2009). Stories about the Virginia Tech and Aurora shootings persisted in the national news for 15 days after the event had occurred (Holody et al., 2013; Holody & Daniel, 2017). Mass murder events are treated differently in the media than single-victim homicides: 87% of all mass murders from 1976 to 1996 were covered in major nationally circulating newspapers (Duwe, 2004) while single-victim homicides often fail to receive coverage in the paper serving their local community (Johnstone et al., 1994; Gruenewald et al., 2011; Sorenson et al., 1998).

As noted in Chapter One, research in recent years has largely been directed toward understanding public mass shootings, a subset of mass-murders. This focus has also extended to the study of media coverage of crime. There is a significant body of work examining news coverage of the 1999 Columbine school shooting (Altheide, 2009; Birkland & Lawrence, 2009; Chyi & McCombs, 2004; Frymer, 2009; Lawrence et al., 2001; Leavey & Maloney, 2009; Muschert, 2007; Muschert, 2009; Ogle et al., 2003; Schildkraut & Muschert, 2014; Schildkraut & Muschert, 2019) and subsequent mass school shootings in the United States (Holody et al., 2013; Maguire et al., 2002; McCluskey, 2016). A smaller body of literature is emerging that examines the media coverage of mass shootings in all public spaces (Daniel, 2017; Dahmen et al., 2018; DeFoster & Swalve, 2018; Duxbury et al., 2018; Fox et al., 2020; Holody & Silva & Capellan, 2019; Schildkraut et al., 2018; Schildkraut et al., 2020; Wilson et al., 2016). Few

studies examine how mass murders committed without a firearm are covered by US news media (Cramer, 1994; Duwe, 2004; Levin & Wiest, 2018).

This body of scholarship is concerned with two primary research questions: (1) which events receive greater coverage in the news and (2) how these events are described by journalists (framing). Scholars who investigate the first question – which mass shootings are more newsworthy – rely on the technique of distortion analysis. This methodology, developed by criminologists studying news coverage of homicide (see Gruenewald et al., 2011), compares a known population of crime events against their coverage in one or more media outlets. One consistent finding from distortion studies on mass-shootings is that victim count is positively correlated with the amount and prominence of news coverage (Fox et al., 2020; Maguire et al., 2002; Schildkraut et al., 2018; Silva & Cappellan, 2018). These findings are also present in the broader literature on crime-media research: one of the strongest correlates of news coverage identified by researchers is the number of fatalities (Chermak, 1994; Gruenewald et al., 2011; Johnstone et al., 1994; Paulsen, 2003; Sorenson et al., 1998).

While mass-shootings with higher victim counts received greater coverage, researchers have found that this measure does not explain all the variation in media attention. Silva and Capellan (2019) found that the *New York Times* was more likely to cover mass shootings when the offender was young, of Middle Eastern ethnicity, the offender was ideologically motivated, the offense took place at a school, and when an offender used a combination of weapons. In contrast, Schildkraut et al.'s (2018) study of *New York Times*'s mass shooting coverage only identified offender race (Asian and Other) and if the offender survived the incident as significant correlates of news coverage. It should be noted that these two sets of authors examined mass public shootings and their associated coverage in the Times utilizing different operational

definitions and across vastly different time periods: Silva & Capellan (2019) from 1966-2016 and Schildkraut et al. (2018) from 2000-2012. Schildkraut et al. (2018) also did not include measures of ideological motivation and weapon type, disallowing comparison between the two studies on those measures.

Fox et al.'s (2020) examination of coverage of mass-shooting coverage in the *AP State & Local Newswire* substantiates some of both Silva & Capellan (2019) and Schildkraut et al.'s (2018) findings. The authors found that offenders under the age of 24, ideologically motivated offenders, and incidents in which the offender survived received greater coverage (Fox et al., 2020). While this emergent body of mass-shooting research has uncovered some compelling patterns, it is unclear if these can be generalized to all mass-murder coverage. By examining only public mass shootings, these studies have significantly limited the amount of variation in their independent variables. It is unclear from these studies if differences in public vs private location, weapon type, relationships between victims and offenders, and other associated incident characteristics are stronger correlates for news coverage. In addition, as discussed in Chapter One, many of the operationalization's of 'public mass shootings' exclude gang-related murders and familicides, further compressing the overall population of events under investigation.

This author is aware of only one distortion analysis that examines all mass-murder events, conducted by Duwe (2000). This study examined coverage of mass-murders across a number of news organizations from 1976 to 1999, operationalizing mass murder as "an incident in which four or more persons are murdered within a 24 hour period" (Duwe, 2000, p 373). Duwe utilized the UCR SHR reports for the time period under examination, adding an additional 37 cases not reported to the FBI and removing 55 cases that did not meet his inclusion criteria for

a total of 568 events. While the author examined the incidents for overall inclusion in the dataset, it is unclear if they cleaned the data itself.

Duwe's (2000) dependent measure, based on a collection of over 30,000 articles pulled from searches in *Lexis Nexis*, CARL, CD Newsbank, and the indexes for 5 national newspapers, can be difficult to interpret and compare with other studies. Because such a breadth of news organizations were represented, Duwe (2000) assigned a score of 1-7 to each newspaper based on circulation and geography of the outlet on the premise that "public perceptions of mass murder are more likely to be influenced by cases that receive prominent and widespread news coverage" (p. 377). Thus, greater weight is given in analysis to coverage in newspapers with large circulation and reporters geographically further from the event location. The overall explanation of how these values are assigned and what they mean is difficult to keep straight. For example, the average 'newspaper score' for the total corpus is 126.95, but this figure is difficult to interpret given that this value represents both the total number of articles printed about an event and the assigned value of the newspaper in which those articles appeared.

Of the more interpretable results, Duwe (2000) found that "almost every" mass killing in the dataset was reported in at least one newspaper (the exact statistic is not provided in the paper). Forty-three percent of all incidents were reported in the *New York Times*, which substantially relied on wire services to provide coverage (Duwe, 2000). In contrast to newspapers, only 18% of incidents were covered on *ABC*, *NBC*, and *CBS* evening broadcasts, and 4% in weekly news magazines.

In a regression analysis examining correlates of all newspaper coverage,¹ the number of fatalities and number wounded were positively associated with news coverage, with fatalities

¹ The Oklahoma City and World Trade Center bombings were removed from the analysis because they were extreme outliers for wounded count and newspaper score (Duwe, 2000).

appearing to be a stronger correlate. Incidents were more likely to see increases in coverage when offenders targeted strangers², when the offenses took place in a public setting or the workplace, and when victims and offender(s) were of different races. In a second model, examining incidents from 1982-1996, the use of an assault weapon, older offenders, and offenders who did not commit suicide were also significantly more likely to have increased news coverage.

Two additional studies have examined media coverage of mass murder incidents from the perspective of different research questions and methodological approaches. Cramer' (1994) examined all articles about mass murder or gun control in *Time* and *Newsweek* from 1984-1991. Less a scientific work than commentary, Cramer sought to identify possible ethical concerns in covering mass murder events. Cramer (1994) argues that coverage of mass murders in these two newsmagazines is biased, distorted, and may induce harm in the form of copycat crimes. In sharp contrast to this paper is Levin & Wiest's (2018) rigorous experiment testing how changes in news focus affect consumer interest.

While the body of literature examining media coverage of mass shootings and mass murder is new and limited, this work makes clear that these events are not treated equally by news outlets and variation in coverage cannot be solely explained by victim count. This conclusion is further supported by several qualitative studies examining the content of mass-shooting news coverage. In an examination of the frames used to explain mass shooting events from 2013-2015, Duxbury et al. (2018) found that murder-suicides, shootings in a public location, and non-black offenders were more likely to be explained as the product of mental illness than as gang violence. The choice to use each of these two frames was significant, as the

² Reference category: acquaintances.

mental illness frame suggested that the offender was fundamentally good and a victim of society -- and thus redeemable -- while the gang violence frame emphasized the offender's threat to the community (Duxburty et al., 2018). Researchers have also identified the use of the mental health frame in studies of school shootings (Consalvo, 2003; DeFoster & Swale, 2018). It appears that the use of mental health explanations for mass-shootings have increased in the media over time (DeFoster & Swale, 2018; McGinty et al., 2014).

Other qualitative studies of mass-shooting coverage have examined how journalists have engaged with the discourse around guns as a cause of these events. In an examination of the Aurora, CO shooting, Holody & Daniel (2017) found that a larger percentage of nationally circulating newspapers framed the event as an issue of gun control in comparison to local newspapers, indicating that coverage may vary not only according to elements of the event but also due to characteristics of the news outlet. In a comparison of ideologically motivated and non-ideologically motivated mass-shootings, Schildkraut et al. (2020) found that the ideological shootings were framed with terms evoking war, while the non-ideological shootings were attributed to the prevalence of US gun ownership.

These differences in framing are not simply of scientific interest – research suggests that they may have effects on consumers. Levin and Wiest (2018) conducted an experiment in which they manipulated the framing of a story about a high school mass shooting: one version focused on the offender, one on a victim, and a final version on a “heroic figure” who intervened to stop the shooting. Online participants were randomly assigned one of the stories and were asked to select one of three options: (1) answer a series of questions now and skip the rest of the story, (2) answer the questions now and then decide whether to read the story, and (3) read the story then answer the questions, which were used as measures of respondents' interest in the article.

Respondents presented with the hero-story had a significantly higher mean interest score than the other two story frames (Levin & Wiest, 2018). In another framing experiment, Wilson et al. (2016) randomly assigned college students to read a news article about a mass shooting that discussed the offender having a history of mental illness, a mass shooting article that did not discuss the offender's mental health, or a control article. Participants who read any of the three articles referencing the offender's mental health exhibited significantly greater negative attitudes about the perceived dangerousness of all mentally ill individuals and had significantly lower belief in the efficacy of treatment or rehabilitation (Levin & Wiest, 2018). These studies demonstrate that variations in mass-shooting frames – the choices made by journalists and their associated news organizations – can have demonstrable effects on their audiences.

This body of quantitative and qualitative literature demonstrates that mass-shootings, a subset of all mass-murders, are not treated equally by news media. Furthermore, it appears that there are some emergent patterns in the correlates of news coverage across time periods and news outlets. The current study seeks to expand this work by examining coverage of mass-murders in the 21st century, posing the following research question:

RQ1: What event, victim, and offender characteristics make a mass-murder more newsworthy?

Given the findings of Duwe (2000), Silva & Capellan (2019), Schildkraut et al. (2018), and Fox et al. (2020), I hypothesize:

H1: The number of fatalities is positively correlated with the amount of news coverage devoted to a mass murder event

H2: Ideologically motivated mass murder events will receive greater coverage than non-ideologically-motivated mass murders

H3: Public mass shootings will receive greater coverage than familicides and felony-related mass murders

Media Coverage of Crime

While the literature on the newsworthiness of mass murder is limited, there is a much larger body of research examining how news organizations cover all violent crime, particularly homicide. Crime makes up a significant portion of the daily news cycle (Chermak, 1994; Kilte et al., 1997; Lotz, 1991), serving as a mechanism to reinforce societal norms (Gamson et al., 1992; Grabe, 1999; Knight & Dean, 1982; Surette, 1994; Surette, 2007). Crime news serves both as a reflection of a society's values and a means of reifying those values for its readers – what Katz (1987) calls a “ritual moral exercise.” Thus, examining crime stories can also reveal insights into societal norms and values.

In the United States, violent crime – particularly homicide – is king. The most common offenses – petty, nonviolent, and white-collar crimes – are given the least amount of attention by news organizations, while the least common and most violent crimes are those most likely to make headlines (Baranauskas & Drakulich, 2018; Garofalo, 1981; Surette, 2007). These public is presented with melodramas in which innocent stranger victims are preyed upon by dangerous, irredeemable villains - a world in which risk of victimization is equally distributed across neighborhoods, gender, age, and race (Baranauskas & Drakulich, 2018; Best, 1999; Stallings, 1990; Surette, 1994).

Quantitative crime-distortion research demonstrates that media coverage of homicide is not reflective of the reality of homicide. As previously noted, the strongest predictor of news coverage is the number of victims – the number of fatalities is positively correlated with greater coverage of homicide events (Chermak, 1994; Gruenewald et al., 2011; Johnstone et al., 1994;

Paulsen, 2003; Sorenson et al., 1998). One study suggests that offender count may also affect newsworthiness, with the number of offenders participating in a single event positively correlated with the greater news coverage (Paulsen, 2003). In addition, homicides committed with a gun (Gruenewald et al., 2011) and using unusual methods (Johnston et al., 1994; Sorenson et al., 1998) are more likely to receive coverage than homicides committed with other weapon types.

The characteristics of the offender and the victim also have been shown to affect the newsworthiness of a homicide event. Children (Boulahanis & Heltsey, 2004; Grosholz & Kubrin, 2007; Gruenewald et al., 2011; Johnstone et al., 1994; Sorenson et al., 1998), white victims (Gruenewald et al., 2011; Johnstone et al., 1994; Kilde et al., 1997; Lundman, 2003; Paulsen, 2003; Sorenson et al., 1998) and female victims (Boulahanis & Heltsey, 2004; Johnstone et al., 1994; Lundman, 2003; Paulsen, 2003; Sorenson et al., 1998)— those least likely to be homicide victims according to national statistics- are more likely to receive coverage than adults, victims of color, and men. While the pattern of under-reporting victims of color is a consistent finding across studies, scholars disagree as to its causes. Several explanations have been proposed including media ‘redlining’ of low-income neighborhoods (Lotz, 1991), racial threat and racism hypotheses (Bjornstrom et al., 2010; Chiricos & Escholz, 2002), the concept of an ‘ideal victim’ (Christie, 1986; Greer, 2007), and cultural stereotypes (Lundman, 2003; Gruenewald et al., 2011). One of the few papers known to this author to directly test these theories in an examination of television coverage did not identify overwhelming support for any single hypothesis (Bjornstrom et al., 2010). More direct tests of these hypotheses are needed to understand why victims of color are under-represented in crime news.

Findings about the impact of offender racial/ethnic identity on news coverage are mixed. Some studies have identified Black and Hispanic offenders as more likely to receive news coverage than White homicide offenders (Dixon & Linz, 2000; Gruenewald et al., 2011; Lundman, 2003; Sorenson et al., 1998). One novel study suggests that there may be an interaction effect between the gender and race of the victim and the gender and race of the offender, with the greatest attention paid to homicides with a black male offender and a white female victim (Lundman, 2003). In contrast, another group of studies, largely examining news coverage in majority-minority cities, has found that White offenders are over-represented compared to their offense rate (Boulahanis & Heltsey, 2004) or that offender race was not a significant predictor of coverage (Paulsen, 2003; Schildkraut & Donley, 2012; Taylor & Sorenson, 2002). Thus, the newsworthiness of offender race appears to be predicated on the larger racial dynamics of the location in which the homicide event took place.

Given the findings from the literature on media coverage of overall homicide, I hypothesize that:

H4: Non-white mass-murder offenders will receive greater news coverage than white mass-murder offenders

H5: Events in which the majority of victims are (a) white, (b) adolescent, and (c) female will receive greater news coverage

There are several limitations to this body of distortion literature and the extent to which it can be generalized to the modern news context. Much of the work examining newsworthiness of crime only examines print newspapers; several of the key works cited in this proposal took place long before the emergence of digital media. 21st century distortion studies continue to rely on a single news outlet, particularly the *New York Times* as their source of media content (see

Schildkraut et al., 2018; Silva & Capellan, 2018). Thus, the literature has failed to account for variation across media outlets and the role regional bias plays in determining newsworthiness. Communications research examining the spatial relationships between news organizations and the events they cover (Shapiro & Schofield, 1986; Shoemaker et al., 2007; Turcotte et al., 2017) and the impact of organizational characteristics on the news product (Miller & Goidel, 2009; Shoemaker & Reese, 2014) shows that these two variables should impact news coverage decisions. This study will address this gap by examining news content from both national and regional outlets across the United States.

In addition to concerns about medium, the cited literature does not address issues around the temporality of the two compared datasets. In most cases, authors compare the most up-to-date information about an offense (in many cases pulled from police or court records) with news articles that came out shortly following the offense itself. In doing so, researchers assume that newsworthiness decisions were based on information reporters may or may not have had at the time. For example, a researcher may have coded in their crime event dataset that the offender in a case is white. But if that offender wasn't identified by police until a month after the homicide, the reporter can't take the offender's race into account when making decisions about newsworthiness. When examining media coverage of a series of crimes, the data about said crimes needs to reflect what reporters and police knew *at the time* to make accurate inferences about how event characteristics influenced newsworthiness assessments. In this study, I address this deficit by comparing the first 30 days of news coverage with the information known to police and reporters about an incident within that 30-day period. This methodology is explored further in Chapter Three.

The Construction of Crime News

The patterns of newsworthiness examined by media criminologists are closely tied to the everyday practices of journalists and news organizations. As noted by Gans (1979) in his seminal study of the employees at *CBS*, *NBC*, *Newsweek*, and *Time*, news organizations are “bureaucracies staffed by professionals.” The social artifact that is *news* is a result of several influences, from the individual journalist to the cultural milieu they inhabit (Shoemaker & Reese, 2014). Thus, patterns in the coverage of homicide can only be understood in the context of the process of news work.

News organizations place constraints on their employees. Even when confronted with highly unusual and unexpected stories (a ‘what-a-story’ in the words of Berkowitz), journalists are guided by a maxim of efficiency – they need to quickly produce content within the confines of tightly allocated word counts, column inches, or segment time at the lowest cost possible to the organization (Bennett, 2003; Berkowitz, 1992; Chagon, 2015; Gans, 1979). While the 21st century has provided several affordances to journalists – allowing them to be more mobile and making some aspects of production easier – new technology has introduced new burdens in balancing both the offline and online versions of the news product (Dupagne & Garrison, 2007; Robinson, 2011).

To manage the demands of the modern newsroom, journalistic practice has evolved to incorporate daily routines, including a norm of objectivity and professional code of news values (Shoemaker & Reese, 2014). The norm – or in the words of Johnson-Cartee (2005) a myth – of objectivity attempts to subject U.S. journalistic practice “to the rigors of the scientific method” (Streckfuss, 1990). According to this principal, individual journalist’s subjectivity can be removed from the news artifact by utilizing style rituals, maintaining ‘balance’ or ‘fairness’

when depicting conflicting opinions, and relying on ‘hard facts’ in reporting (Bennett, 2003; Boudana, 2011; Carpenter, 2008). In doing so, the objectivity norm legitimizes the journalist’s account and shields them from consumer criticism (Skovsgaard et al., 2013; Shoemaker & Reese, 2014). Some post-modern theorists and alternative outlets have pushed back against the objectivity norm, arguing that it is impossible to remove the journalist’s own subjectivity from the news product they produce (McNair, 2017). Partisan news outlets outright eschew the objectivity norm, cultivating their audience by presenting a subjective, political take on the day’s events. However, many of the ‘mainstream,’ non-political news organizations, the focus of this study, continue to be guided by the principles of objectivity.

While the objectivity norm guides journalists in *how* to cover a news event, news values help in deciding *what* to cover. News values are a set of criteria for newsworthiness that are “established in the journalistic field, passed on through textbooks, teachers, and trainers, internalized by apprentice reporters, and enacted through both choice and instinct” every time a story is put together (Parks, 2019a, p. 785). News values are held in common among a society’s professional journalists and lead to a homogeneity of news topic selection across outlets.

Media scholars seeking to understand US news values have turned to examining journalism textbooks, the texts by which journalists are first acculturated into the profession. While news values have experienced some transitions over time, crime and conflict have been a constant since the start of formal journalism education (Parks, 2019b). Other common news values include bad news, drama, novelty or surprise, timeliness, and social impact or significance (Harcup & O’Neil, 2017; Johnson-Cartee, 2005). Given these news values, homicides with a higher victim count are more newsworthy than single-victim crimes precisely because they are rare, highly dramatic, and negative events.

Sources for Crime News

Crime news, for all its drama and emotionality, is a highly routinized genre of reporting. Reporters on the crime beat are filing stories every day, requiring the development of reliable sources in law enforcement, the courts, and the correctional system. As noted by Berkowitz (1992), even when covering an exceptional story such as a mass-murder, reporters turn back to sources of routine such as established sources to manage the unexpected. Thus, news about crime – and the solutions presented to the public - is dominated by representatives of the criminal-legal system (Bennett, 2003; Chermak, 1995; Lotz, 1991; Surette, 2007).

This relationship between reporters and “official” sources is not unique to crime news. The indexing hypothesis – first proposed by Bennett (1990) – suggests that a combination of routinization, transactional relationships, and democratic norms lead mass media to look to government officials as the primary source in most news and editorial writing. Thus, the range of viewpoints expressed in a story is ‘indexed’ to the range of viewpoints expressed in mainstream political discourse (Bennett, 1990). Non-official voices are included only when they express viewpoints already emergent in official circles.

The indexing hypothesis has largely been examined in the context of US political news. Scholars have demonstrated a strong relationship between the discourse promoted by American political institutions and media coverage of events. Examples of this analysis include policy debates in the 20th century (Zaller & Chiu, 1996), national security reporting (Hallin et al., 1993), and various US military engagements (Bennett et al., 2007, Entman & Page, 1994; Mermin, 1999). In each of these cases, scholars found that the views of elites dominated reporting and limited the “range of problems, solutions, values, and ideas presented to the public” (Bennett, 2003).

While official viewpoints typically dominate reporting on political stories, “unexpected, unplanned, and highly newsworthy events [are] moments when elite dominance of the news is most vulnerable” (Lawrence, 2000, xii). In those moments, unofficial, un-indexed, and marginalized views can be admitted into stories and thus the public sphere. Two examples of elite viewpoints losing control of media narratives include the Rodney King beating by police in 1991 (Lawrence, 2000) and the Abu Ghraib torture revelations in 2004 (Bennett et al., 2007).

Lawrence (2000) examined articles in the *New York Times* and the *Los Angeles Times* regarding police use of force cases from 1985-1994, both prior and after the Rodney King beating and protests. The articles were highly episodic, individualized, and rarely included critical voices. In 80% of the articles examined, official sources were relied upon. However, Lawrence (2000) argues that the imagery of the King beating, and the reluctance of public officials to “own” the issue of brutality, created space for non-official activists and community members to speak. In articles about the King beating and the protests reviewed in the same two publications, the range of sources is more diverse, and the framing is thematic. Journalists constructed their articles based on the claim from activists that police brutality was an endemic rather than individual problem (Lawrence, 2000).

Bennett et al. (2007) identified a similar, if brief, moment of press independence when pictures of prisoner abuse and torture from Abu Gharib prison were first published by *CBS News* in April 2004. During a two-week period after the story broke, Benentt et al. (2007) observed that *The Washington Post* and *CBS News* framed the events as instances of “torture.” However, after the two-week period, the Bush administration’s framing came to dominate, and the events were re-defined as “abuse.” Ultimately, Bennett et al. (2007) argue that the photos out of Abu

Gharib provided an initial period of independence, but the media moved back to indexing stories around elite viewpoints.

It is unclear, given this literature, how journalists will or will not change their sourcing routines in response to mass-murders. There are strong incentives in these cases – limits of time, resources, and the need to find routine in the irregular – to rely more strongly on official sources when reporting on these events. As noted by Graber, “... when sudden death and terror reign, the media largely... become teammates of officialdom in attempts to restore public order, safety, and tranquility” (1997, p 252). However, it is plausible that the vulnerability created by unexpected events allows for the introduction of non-official and even adversarial viewpoints.

The work by Bennett et al. (2003) and Lawrence (2000), while revealing the importance of unusual and unexpected events, also points to the role of technology in shaping the selection and use of sources. In both the Rodney King beating and the Abu Gharib torture, visual media in the form of video and photos were critical in providing a mechanism for news outlets to divert their traditional dependence on official sources. While those pieces of media were mailed in to news outlets, the advent of social media has allowed for an increasingly two-way exchange of information between reporters and citizens. Reporters increasingly engage in “ambient journalism”, in which they use social media to become aware of news events or ways of interpreting them outside of traditional sources of information (Andén-Papadopoulos, 2013; Bruno, 2011; Hermida, 2010). In the case of crime events, this means news organizations are no longer reliant on an arrest warrant or press briefing from law enforcement to become aware of a crime event. Contemporary journalists describe having to make sense of a “tsunami of images” uploaded by citizen witnesses (Schwalbe et al., 2015) and news organizations can utilize user-

generated content to detect an emerging story and provide live coverage without having any reporters on the ground (Bruno, 2011; Hermida, 2012).

While journalists have greater access than ever before to the first-hand accounts of witnesses and the videos produced by them, they are still bound by professional norms. Surveys and interviews with journalists demonstrate that a significant amount of gatekeeping is taking place: the newsworthiness, objectivity, and authenticity of citizen-produced photos and videos is assessed before sharing with the public (Mortenson, 2015; Nilsson, 2019; Rauchfleisch et al., 2017; Schwalbe et al., 2015). Two studies that examined the use of citizen-witnessing in coverage of mass shootings suggest that, while the generation of these images and video may be helpful for journalists in detecting and understanding breaking news events, their dissemination to the public is still limited. In an examination of coverage of the Virginia Tech shooting, Wigley and Fontenot (2009) found that 9% of all cited sources were derived from the internet, with the majority utilized in the first two days of reporting. Wigley and Fontenot's study of the Gabrielle Giffords shooting (2011) more explicitly identified citizen-generated online content, with 9.5% of all sources in the reviewed news qualifying.

Given this literature, and the overall indexing hypothesis, it is likely that citizen-produced information is more likely to be used by journalists when information from official sources is minimal. While it is unlikely that citizen-generated content has come to dominate reporting on mass murders since Wigley and Fontenot's studies, it is possible that its use has increased. In addition, it is unclear how mass murder events, and the uncertainty they generate, may alter or reinforce the traditional reliance reporters have on criminal-legal sources. Thus, my second research question is:

RQ2: What sources do journalists use when reporting on mass-murders?

This research question is further guided by two sub-questions, drawn from the literature on crime-news sourcing:

- a. Are oppositional views represented in mass murder reporting?
- b. How is social media used as a source?

Why is studying media coverage of crime important?

Mass-murder, like other types of multiple homicide (spree and serial murder) is an incredibly rare phenomenon. Given how unlikely it is that the average American will ever be witness to or know someone who has been affected by one of these events, the media play an extraordinary role in shaping the public's knowledge of mass-murder (Gordon & Riger, 1989). In terms of social constructionism, citizen's *subjective reality* of mass-murder is highly influenced by the contribution of mass-media.

Social constructionism proposes that your knowledge of a phenomena is not only influenced by *objective reality*.³ Rather, individuals develop a subjective reality based on their direct experiences, interactions with others, and cultural influences (Adoni & Mane, 1984; Berger & Luckmann, 1966). Thus, one's understanding of what constitutes *deviance* or *crime* can differ from other individuals in a society, and common understandings of these concepts change across time and space (Brownstein, 2000; Burr, 2015). The power of these influences – experiences, interpersonal relationships, and culture – can also vary in importance. According to Ball-Rokeach and DeFleur (1975), media becomes more important in constructing one's subjective reality as direct experience with the phenomena decreases. In the case of mass murder, the subjective reality is in most cases almost completely shaped by media reports. Decisions

³ A strict constructionist position, which I do not take here, would assume that there is no objective reality – all knowledge is socially constructed and phenomena cannot be understood outside this perception.

about what victims, offenders, and events to cover shape the public's understanding of the frequency of mass-murder and what a 'typical' case looks like.

The role of sources in crime news also plays a critical role in understanding how the public perceives the problem of mass-murder specifically, and violent crime more generally. Official government sources, particularly law enforcement, serve to promote the public order and the existing system of crime control (Barak, 1995). Non-official sources, by contrast, can provide alternative explanations and policy solutions to violent crime. Empirical research suggests there is a relationship between crime news consumption and support for punitive approaches to criminal justice (Baranauskas & Drakulich, 2018). If crime reporters are shifting in their use of official source, this may affect the policy preferences expressed by the public.

SUMMARY

Mass-murder – the killing of four or more people in a single event– is an incredibly rare phenomenon that frequently receives disproportionate media coverage. Given the news values of crime, conflict, novelty, and drama, this is unsurprising. While the crime-media research has established that number of fatalities is a strong predictor of news coverage, it cannot explain all the variation in homicide news coverage. Thus, the first research question of this dissertation is: what event, offender, and victim characteristics make a mass-murder newsworthy?

While news values help journalists decide what events to cover, norms of objectivity, democratic values, and routinization aids them in deciding how to cover those events. The indexing hypothesis theorizes that the range of debate presented in news is bound by the viewpoints represented by government officials. In the case of crime news, this means that journalists traditionally rely on sources from the criminal-legal system and represent their views. However, unusual and conflictual events can provide an opening for unofficial voices to enter

the public conversation. Technology may be assisting in this shift, by allowing citizens to share photos and videos that contest official narratives. It is unclear how often reporting on mass murder follows crime reporting routines and when, if at all, indexing is less influential. Thus, the second research question of this dissertation is: *What sources do reporters use when reporting on mass-murders?*

CHAPTER 3: DATA AND METHODS

The following chapter describes the process by which the mass-murder event and news data was collected, and the methodologies of media distortion analysis and content analysis used to answer the research questions posed in Chapter 2.

DATA

This project relies on two primary datasets that were developed to address the research question: an open-source database of all mass murders committed in the United States from 2004-2018 and a collection of articles from seven major US regional and national newspapers about the mass-murder events. The following section describes how these two datasets were created.

Developing an Open-Source Database of US Mass-Murders

As noted in Chapter 2, I utilized the Congressional Research Service’s definition of a mass murder: a multiple homicide incident in which four or more victims are murdered—not including the offender(s)—within one event, and in one or more geographical locations relatively near one another” (Krouse & Richardson, 2015). For an event to be included in this study, it therefore needed to meet three inclusion criteria:

1. Four or more fatalities, not including the offender
2. Fatalities occur in one ‘event’ (temporal boundary)
3. Fatalities occur geographically near one another (physical boundary)

To operationalize the first criteria, I defined ‘victims’ as individuals who died from injuries inflicted by one or more offenders within 30 days of the offense. This operationalization rules out accidental deaths from law enforcement (friendly fire) and individuals who survived the initial incident but died months or years later from complications related to their injuries. Thus,

this criterion is assessing the number of individuals killed in the immediate period because of the offender's actions.

Scholars vary in their operationalization of time – how long a period constitutes a single event? Some scholars do not impose any temporal restriction (Holmes & Holmes, 2001; Huff-Corzine et al., 2014), while others require the fatalities to have occurred within 24 hours (Dietz, 1986; Duwe, 2007). I utilize the 24-hour cutoff set by Duwe and Dietz to allow for comparison with their studies. Instituting a temporal cutoff also aids in distinguishing between mass and spree murders which, as noted in Chapter Two, require some temporal separation between killings. Finally, to operationalize the physical boundary, I did not include events that crossed more than one state line.

The first step in developing a dataset of mass-murder events was to identify the population of all mass murders that occurred in the United States from 2004-2018 (15-year period). I began by turning to the FBI's Supplementary Homicide Reports (SHR), part of the Uniform Crime Reports (UCR). The SHR is national program in operation since 1976 that tracks homicide events in the United States (Pizarro & Zeoli, 2013). Law enforcement agencies submit information about a homicide shortly following initial discovery and investigation either to a state-level data collecting agency or to the FBI directly (Parkin & Gruenewald, 2017). These reports include information on the event location, circumstances of the homicide including weapon type, and demographic characteristics of the offender(s) (if known) and victim(s). Although the SHR has noted limitations, this dataset is used frequently among homicide researchers (Allen & Buckner, 1997; Braga et al., 1999; Fox & Friedel, 2017; Loftin, 2015; Maxfield, 1989).

From January 1, 2004 through December 31, 2018, 467 homicide incidents in which four or more individuals, not including the offender, were killed were recorded in the SHR (Kaplan, 2019). However, upon inspection of the event data, it is apparent that there are problems. For example, the 2017 Harvest Music Festival shooting in Las Vegas is listed as 6 separate events, rather than one. There is an incident South Bend, IN in April 2014 that has eight victims, all 2-years old. When trying to validate this horrific-sounding crime, no news reports can be found. However, there are many articles from April 2014 about how a group of 8 teenagers in South Bend killed a 2-year-old child (Blake, 2014).

Errors in the SHR are not unknown to researchers – comparisons with police records and local newspapers show that there is a high level of missing information and disagreement in homicide circumstances (Maxfield, 1989; Parkin & Gruenewald, 2017; Pizarro & Zeoli, 2013). These flaws are due to a number of factors, including: (1) homicides occurring across jurisdictions are often reported by each responding agency, leading to duplication (Wiersma et al., 2000); (2) SHR data is reported early in the investigative process, leading many offender characteristics to be listed as ‘unknown’ (Pizarro & Zeoli, 2013); (3) participation in the program is voluntary, meaning homicides from several states are not represented; (4) the program is not audited by the FBI, leading to variation in validity and reliability across agencies.

To improve the identification of cases for this study, I utilized open-source searches to (1) validate the SHR cases and (2) identify other cases that met my inclusion criteria but were not represented in the dataset. For each incident identified in the SHR, I attempted to identify the associated event using searches in *Google*, *Newsbank*, *LexisNexis*, and *Proquest*. Identifying characteristics from the report including the number of victims and the location of the offense were used as search terms while the month and date were used to limit the date of publication.

When I identified a news report that appeared to be a match for the SHR incident, I verified further details. For example, I ensured that the ages of the victims in the SHR were +/- 1 year of those reported in the newspaper and the gender of the victims matched. I also checked that the information provided about the offender in the article matched that in the SHR. If these details aligned, I considered the event verified, documented the date of the incident, and marked the incident for a full search (explained in *Database Coding*).

A SHR incident report was removed from the final dataset if (1) all open-source searches failed to turn up an event; and (2) I could identify a demonstrable error with the inclusion criteria or coding of the SHR. Removing a case under the first condition took time to satisfy – I conducted multiple searches under broadening search terms before concluding that no information could be found regarding an incident. It should be noted that an absence of information is not evidence that an incident did not occur. Rather, I chose to remove these events from my final database because I could not validate the information contained in the UCR.

Under condition two, I identified one or more articles that matched the details provided in the SHR but concluded that the incident did not meet my inclusion criteria. One common reason I removed a case is because one or more of the coded victims survived, bringing the total fatality count under the threshold of four. The SHR also included some serial killings or multiple homicides that took place prior to 2004 – one as early as 1978 - documented when the victim's bodies were uncovered in the 21st century. Ultimately, I identified 140 incidents in the SHR that needed to be removed from the dataset: 106 because there was no identifiable information in the open search, 34 because of an error in coding.

For the period from 2006-2014, I also relied on a *USA Today* project to verify SHR mass killing incidents (Overberg et al., 2017). This project compared SHR reports with local media or

law enforcement records, documenting those instances in which incidents were unsubstantiated or the result of mistakes. The *USA Today* team also identified mass homicide incidents that were not included in the SHR because they took place in non-participating states or on federal property, and I was able to add these to my database. Following this project, the study concluded that the SHR mass-murder data had a 61% accuracy rate, with a significant number of events mis-coded in the dataset (Overberg et al., 2017).

Finally, I needed to identify mass-murder events that fit my inclusion criteria but were not coded in the SHR. To do so, I conducted keyword searches in Google, *Newsbank*, and *Lexis Nexis* from US news publications in 2004 – June 2019.⁴ Examples of keyword searches include “quadruple homicide”, “quadruple murder”, “murder-suicide”, “mass shooting”, and “mass killing.” Finally, I utilized two additional open-source databases, the *Extremist Crime Database (ECDB)*⁵ and *The Violence Project (TVP)*⁶ dataset to identify ideologically motivated and public shooting mass murders, respectively. Through this process, and the use of the *USA Today Project*, I added 128 events to the dataset, resulting in a final database of 435 mass murder events.

Database Coding

Following the identification of the mass-murder event population, each incident was coded for the incident, location, offender, and victim characteristics. In developing the codebook for this dataset, I used the UCR Supplementary Homicide Report’s (SHR) variables as a starting

⁴ A six-month lag time was added to account for events in 2018 that were not discovered or reported until 2019

⁵ The Extremist Crime Database (ECDB) is an open-source dataset that seeks to identify and document all acts of ideologically-motivated homicide in the United States from 1990 to the present (Freilich et al., 2014).

⁶ The Violence Project’s (TVP) mass-shooter database relies on the Congressional Research Service’s definition of mass shooting to define its inclusion criteria, documenting all incidents from 1996 in which “a multiple homicide in which four or more victims are murdered with firearm... within one event, and at least some of the murders occurred in a public location.... And the murders are not attributable to any other underlying criminal activity or commonplace circumstance” (Krouse & Richardson, 2015).

point. The SHR includes variables for the Year and Month an offense took place, the municipality where the event occurred; the size of the municipality; age, sex, and race of each of the victims; the relationship between one of the victims and the offenders; age, sex, and race of the offenders; and weapon(s) used by the offenders. To this I added a variable accounting for the day of the offense, a binary variable indicating if the mass-murder was committed in the course of another felony⁷, the US census region in which the offense took place, the type of location targeted (residence, public venue, etc), and additional information about the identified offenders including prior contact with law enforcement in the form of arrest and incarceration history, and if each offender survived the mass-murder incident.

In addition to adding variables to the dataset, I also modified how some of the existing SHR variables were coded. For example, I expanded the number of Racial/Ethnic categories to account for Middle Eastern/North African identities. I also expanded the coding of the variable accounting for the relationship between victim and offender. In the SHR, this variable is only filled for the first victim. I coded this variable for all victim x offender relationships. Finally, I modified the coding of municipality; in the SHR, this largely reflects the responding law enforcement agency. For example, if a County Sheriff responds to an event, that county is typically listed as the location of the offense. I modified the coding for this event so that it reflects the smallest municipal unit recognized by the US Census Bureau.

While the SHR data was used as a starting point with which to populate these variables, this information needed to be validated against other sources. The 128 incidents I added to the dataset also required coding from scratch. For each event in the database, I systematically collected all news documents about the incident from *Newsbank* and *Google*, relying on

⁷ The mass-murder occurred during the course of a robbery/burglary, drug sale, or was the product of organized crime.

LexisNexis and *Proquest* if the former two had few results. To this file I added vital records on victims and offender(s) family, if available, from *Ancestry*. I searched court and jail records for information about offender(s) and sought police after-action reports and press releases. Finally, I looked for information about the location in which the offense took place from municipal websites and the US Census.

After putting together this documentation, I read through the entirety of the material before coding. Information in the file could be contradictory, particularly regarding the ages of victims and offenders and some relationships. To identify the most accurate and reliable information, I prioritized official government records (i.e., court records) first, then newer reports by local journalists as suggested by Freilich et al (2014). Variables were coded as ‘missing’ when relevant information could not be found or the information was contradictory and I couldn’t use my rules to determine which source was more reliable. An individual was only identified as an offender if they had been arrested and charged for the incident – speculation was not enough for an individual to be included.

I first coded the data with the goal of capturing the most up-to-date information. For example, if an individual who was identified as the offender in the SHR had been exonerated, I removed them from the dataset. This data will be used in Chapter Four to describe the ‘reality’ of mass murder from 2004-2018. However, as noted in Chapter Two, it is methodologically inappropriate to compare this information with articles from a 30-day period following the offense. Therefore, I created a second datafile that only includes the information that was accessible to journalists in the 30-days after the event. For example, if police did not make an arrest until six months after a murder, the 30-day file would have the offender listed as ‘unknown’. This allows for a more accurate understanding of how the information journalists

have on-hand may influence their assessments of newsworthiness – the question examined in Chapter Four.

A Note on the Use of Open-Source Data

Use of open-source records significantly increased the reliability and validity of the base UCR data: there were many cases in which I was able to correct mis-coded victim or offender race or identify an offender coded as ‘unknown’ in the dataset. However, open-source data is not without its limitations. As with media coverage, some crime events receive more attention and resources from law enforcement and other government agencies than others. For example, a crime event in which an offender survives and goes to trial will produce more documentation that can be used to validate the dataset than an event in which the offender dies at the scene. This variation in documentation means that data is missing not at random – incidents viewed as more mundane to law enforcement and other government agencies were the most likely to be incomplete in the dataset.

Developing a Dataset of Mass-Murder News Content

After identifying the population of mass-murder events, I engaged in the collection of news content about these incidents. I selected three leading newspapers with a national focus – *The New York Times*, *The Washington Post*, and *The Los Angeles Times* – and a major regional newspaper from four regions: *The Houston Chronicle* for the South region, the *Boston Globe* for the Northeast, the *Minneapolis Star-Tribune* for the Midwest, and the *Seattle Times* for the West region. Each source is archived from 2004 – 2018 on *ProQuest*.

To identify media content, details from each mass-murder event including the location, victim names, and offender name(s) (if available) were used as search terms in *ProQuest*. All news articles published about the events in the identified newspapers within 30 days of the

incident were collected.⁸ Each article was coded for the publication it appeared in, the date of publication, if the article was produced by a wire service (*AP, Reuters, etc*), and whether the article was published on the first page of the newspaper. In addition, the full article text was collected. A total of 9,546 articles were collected - an average of 21.94 articles per event.

METHOD

While the two datasets described above contain a considerable amount of information, they still required some modification to develop the appropriate independent and dependent variables for analysis. The following section describes the methodology used for each research question, independent and dependent variables, and the analytic strategy.

RQ1: What event, victim, and offender characteristics make a mass-murder more newsworthy?

To answer RQ1, I utilized media distortion analysis, comparing the characteristics of the mass-murder events from 2004-2018 with the amount of media coverage they received across the three national and four regional newspapers. Distortion analysis, utilized primarily by researchers examining media coverage of homicide, utilizes a measure of the amount of media coverage as an indicator of newsworthiness. Examining the variation in news coverage across events allows research to identify characteristics that are associated with greater newsworthiness (greater coverage) and thus the ways in which news media construct a social reality of crime (Chermak & Gruenewald, 2006; Schildkraut et al., 2018). Utilizing the previously described dataset of mass-murder articles, two dependent variables were constructed to measure the newsworthiness of the mass-murder events in this study:

- *Total Articles*- The total number of articles published about each mass-murder event
- *Front Page* – 0/1; Did an event receive any front-page coverage?

⁸ Letters to the editor were excluded.

To compare the amount of news coverage with the characteristics of a mass-murder event, the *victim* and *offender* data in the mass-murder dataset had to be recoded to the incident-level. For example, the variable *group victim race* was created to reflect all the victims for a mass-murder event. If all the victims were from one racial group, they were coded for that race. If they represented a mix of racial identities, the group was coded as multiracial. The independent variables for this analysis, derived from the research questions and hypotheses presented in Chapter Two, include⁹:

- *ECDB* – 0/1; Was the event captured in the Extremist Crime Database? This variable is used as an indicator of extremist motivation. Ideologically-motivated murders should receive greater coverage than non-ideologically motivated events (H2)
- *TVP* – 0/1; Was the event captured in The Violence Project database? This variable is used as an indicator of a mass public shooting. Mass public shootings should receive greater coverage than non-public shootings (H3)
- *Felony-related* – 0/1; Was the event committed in the process of another felony event (ex. robbery, gang-hit)? Felony-related murders should receive less coverage than non-felony related murders (H3)
- *Group offender race* – The racial identity of the offender(s). Non-white offenders should receive greater news coverage than white offenders (H4).
- *Number of victims* – The total number of fatalities. The number of fatalities should be positively correlated with the amount of news coverage (H1).
- *Group victim gender* – The proportion of female to male. As the proportion of female victims increases, news coverage is hypothesized to increase (H5).

⁹ A table with the variables for analysis and their coding is available in the Appendix.

- *Group victim age* – Average victim age. As average age of the victim group increases, news coverage is hypothesized to decrease (H5).
- *Group victim race* – What is the racial identity of the victims? White victims are expected to be given greater news coverage than non-white victims (H15)
- *Group victim x offender relationship* - What is the relationship between the group of victims and the offender(s)? Stranger victims are expected to receive greater coverage than other victim x offender relationships.
 - *Family violence* - Was one or more victims a member of the offender(s) family or their child?
 - *Intimate partner violence* - Was one or more victims a romantic partner, partner's family/friends, or partner's child?
 - *Stranger* - Was one or more victims a stranger?

Control variables are included for census region and whether the targeted location was public or a private residence.

Multivariate regression of *Total Articles* was conducted using a negative binomial hurdle model. As will be demonstrated in Chapter 4, this variable is both over-dispersed and zero-inflated. Given that the data under analysis is a population, inferential statistics are not provided.

RQ2: What sources do journalists use when reporting on mass-murders?

To answer RQ2, I will conduct an analysis of the sources used in mass-murder reporting. Because the largest influence on source selection is location, and the associated ability to cultivate relationships with individuals who have knowledge of an event, I examined news coverage of the mass-murders that took place in the major metropolitan areas represented by the seven newspapers in this study. Major metropolitan areas were determined by the U.S. Census

Bureau and are defined in Table 3.1, along with the number of mass murder events that took place in said region.

Table 3.1: Number of mass-murder events occurring in each newspaper's geographical region (N=67)

Newspaper	Census Region	Number of Events
Boston Globe	Boston-Cambridge-Newton, MA-NH	4
Houston Chronicle	Houston-The Woodlands-Sugar Land, TX	8
Los Angeles Times	Los Angeles-Long Beach-Anaheim, CA	18
Minneapolis Star-Tribune	Minneapolis-St. Paul-Bloomington, MN-WI	2
New York Times	New York-Newark-Jersey City, NY-NJ-PA	16
Seattle Times	Seattle-Tacoma-Bellevue, WA	10
Washington Post	Washington-Arlington-Alexandria, DC-VA-MD-WV	9

The characteristics of these events are examined in Chapter 5, in comparison to the full population. These 67 incidents were covered in 1,269 articles: 814 in the local paper of record (local coverage), and 455 in one of the other six papers outside the major metropolitan area (non-local coverage).

To examine the use of sources in these articles, and the ways in which aspects of the mass-murder event are correlated with those decisions, I randomly sampled 200 local articles and 200 non-local articles from this event subset. Each article was then coded for the number and type of unique¹⁰ sources, defined as an entity to whom information is attributed. Attribution can take the form of a direct quote or paraphrase. Repeated citation of the same source was not coded. While some categories of sources were anticipated based on the literature - for example law enforcement, government officials, and individuals who knew the victims - other categories were emergent.¹¹ The articles were coded iteratively, reviewing and condensing codes between

¹⁰ A source was coded the first time it was mentioned. For example, if the mayor was quoted three times in an article, the first quote would be coded as a source, and the other two times would not be coded.

¹¹ Codes are discussed in further detail in Chapter 5.

rounds, until saturation was reached. The use of sources is compared both according to aspects of the mass murder itself and whether coverage was local or non-local.

SUMMARY

I developed (1) a novel open-source database capturing all mass-murder events in the US from 2004-2018 and (2) a dataset of all news articles published about these events in three national US newspapers and four regional newspapers covering each US Census region. In Chapter Four, I will use my mass-murder dataset to examine the reality of mass-murder and examine which of these events receive greater coverage in the news media. Chapter Five will examine the sources of information privileged in this reporting and subsequent implications for the public's understanding of mass murder.

CHAPTER 4: NEWSWORTHINESS OF MASS MURDER

Chapter Four is guided by the first research question posed by this dissertation: What event, victim, and offender characteristics make a mass-murder more newsworthy? To answer this question, I first demonstrate the reality of mass-murder from 2004-2018. I then examine the differences in the amount of news coverage these events received to identify correlates of newsworthiness.

Characteristics of the Homicide Events

From 2004-2018, 435 incidents – an average of 29 per year - were identified in which four or more individuals, not including the offender(s), were killed within a 24-hour period by one or more offenders. Of this population, an offender was identified by law enforcement in 404 cases, resulting in a clearance rate of 92.8%. For a population of mass-murder incidents, the mean number of victims per event is relatively low – 5.22 with a standard deviation of 4.17. As demonstrated in Figure 4.1, there is little variation in mean victimization across the years considered in this study. However, as shown in Figure 4.2 these means mask that 62% of all incidents have the minimum qualifying fatality count of four, while 17 events have fatality values ranging from 10 to a high of 56. This results in a highly right-skewed distribution of this variable.

Figure 4.1: Mean fatalities per event, by year

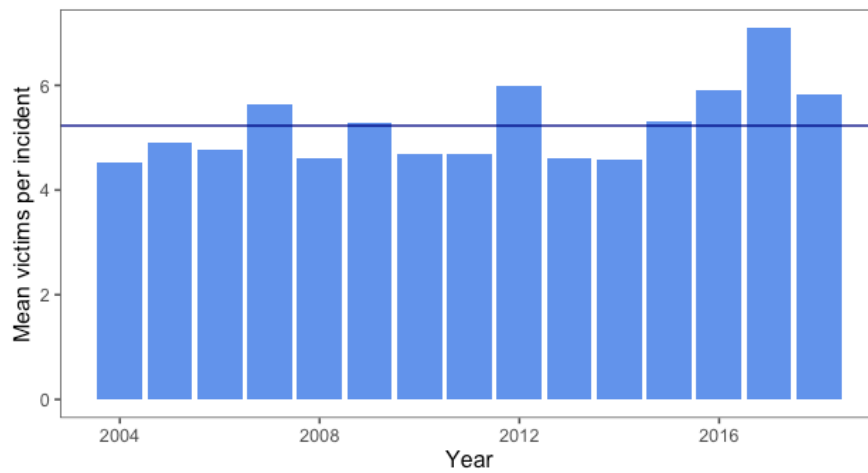
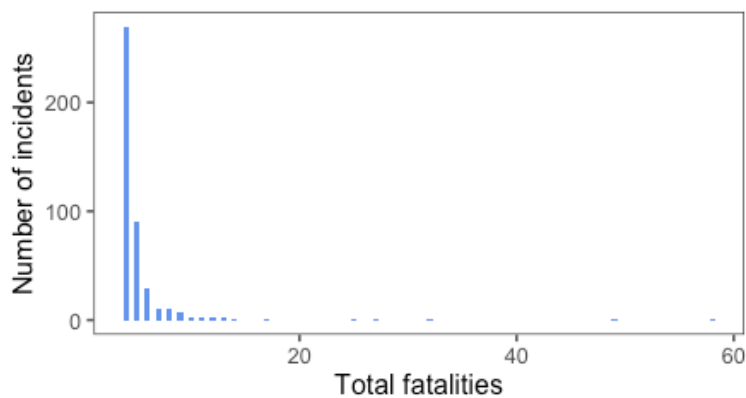


Figure 4.2: Histogram of fatalities per event



Descriptive statistics for the incident-level characteristics of this population are displayed in Table 4.1. These data demonstrate why it is necessary for scholars to broaden the scope of research beyond public mass shootings – they comprise only 17% of all mass murders from 2004-2018. The other 58% of mass murders committed with a firearm fail to meet *The Violence Project’s* operational definition of a public mass shooting. Further, a quarter of the incidents in this population were committed using weapons other than a firearm. A plurality of the mass-murder events in this population took place in the South – following geographical trends in single-victim homicides – followed by the Midwest and West. Surprisingly, despite the

population density of the Northeast region, only 12% of all mass-murder events took place in this area.

Table 4.1: Incident Characteristics (N = 435; 404 cleared)

	Mean (%)	SD	% Missing	Valid N
Public mass shootings	(17.24)		0.0	435
Ideologically motivated	(5.52)		0.0	435
Felony-related	(19.00)		8.0	400
Victims per incident	5.22	4.17	0.0	435
Offenders per incident	1.29	0.78	0.2	434
<i>Weapon Use</i>				
Firearm	(60.46)		0.0	435
Knife	(4.37)		0.0	435
Arson	(7.59)		0.0	435
Other	(4.83)		0.0	435
Use of multiple weapon types	(22.76)		0.0	435
<i>Region</i>				
Midwest	(25.52)		0.0	435
Northeast	(11.95)			
South	(40.92)			
West	(21.61)			

Table 4.2 presents descriptive statistics for the locations in which the mass homicides in this population took place. As noted previously, several offenders engaged in attacks across multiple locations, leading to a larger number of locations (N = 532) than there are homicide events. The most targeted location type was private residences (68.74%), with public buildings (16.04%), parking lots and roadways (7.35%), outdoor spaces (5.65%) and public buildings all falling far behind.

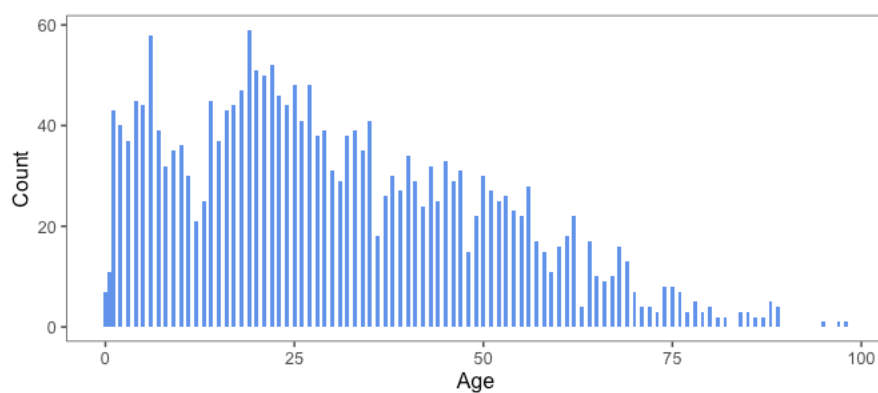
Table 4.2: Location Characteristics (N = 532)

	Mean (%)	SD	% Missing	Valid N
<i>Location Type</i>			0.23	534
Outdoors	(5.65)			
Parking lot / roadway	(7.34)			
Public building	(16.04)			
Residence	(68.74)			
Other	(2.23)			
<i>Municipality size</i>			0.19	531
0 thru 49,999	(49.20)			
50,000 thru 99,999	(9.42)			
100,000 thru 249,999	(14.88)			
250,000 thru 499,999	(9.42)			
500,000 thru 999,999	(8.28)			
1,000,000 +	(8.85)			

Victim Characteristics

This dataset records 2,269 individuals killed in multiple homicide incidents. As demonstrated in Figure 4.3, the victims skew young, with a cluster of victims at adolescence and a 2nd grouping of victims in their 20s. The mean victim age was 30.39 (sd = 20.7),

Figure 4.3: Histogram of Victim Age



The victims in this population were slightly more male (53.15 %) than the U.S. population (U.S. Census Bureau, 2010), as demonstrated in Table 4.3. Black victims were overrepresented, compared to their proportion of the U.S. population, and White victims were under-represented.

Table 4.3: Victim characteristics (N = 2, 269)

	Mean (%)	SD	% Missing	Valid N
Age	30.39	20.07	0.22	2264
Sex			0.00	2269
Male	(53.15)			
Female	(46.85)			
Race			1.48	2236
American Indian or Alaskan native	(1.48)			
Asian	(5.23)			
Black	(26.61)			
Hispanic/Latino	(14.40)			
Middle Eastern	(1.21)			
Multiracial	(1.29)			
White	(49.78)			

Offender Characteristics

Finally, Table 4.4 presents information about the known mass-murder offenders in this dataset. As noted in Chapter 3, I collected data on these mass-murder events reflecting both the knowledge that would be available to journalists within the first 30 days following the offense and the information we have at the present day. Information about location, how the offense took place, and the characteristics of victims as presented in the previous tables didn't significantly differ between these two time periods. However, there were changes over time in the identification of offenders. Within the first 30 days of the offense, only 433 were identified by law enforcement or witnesses, compared to 528 at the present. Between the two time periods, there were also cases in which an individual previously identified as the offender had charges dropped or was found not guilty in a court of law.

Interestingly, despite the difference in the overall number of individuals identified in the two time periods, the average values for each group is similar. The offenders – whether viewed in the first 30 days or with all available information - are overwhelmingly male with a mean age similar to their victims (approx. 32). Black individuals continued to be overrepresented

compared with the U.S. population and White persons underrepresented. Slightly more than half the offenders had been arrested prior to the mass-murder event, and approximately 30% had been incarcerated.

Table 4.4: Comparison of information about offender characteristics 30-days post-offense and to date

	First 30 days (N=433)			To date (N=528)		
	Mean (%)	SD	% Missing	Mean (%)	SD	% Missing
Age	32.03	10.69	0.23	31.61	10.55	0.18
Sex			0.00			0.00
Male	(93.30)			(94.56)		
Female	(6.69)			(6.44)		
Race			1.17			1.15
American Indian or Alaskan native	(1.64)			(1.92)		
Asian	(5.14)			(4.41)		
Black	(36.92)			(38.89)		
Hispanic/Latino	(13.08)			(14.56)		
Middle Eastern	(1.64)			(1.34)		
Multiracial	(0.70)			(0.58)		
White	(40.88)			(38.31)		
Prior arrest (0/1)	(53.39)		1.41	(55.81)		2.33
Prior incarceration (0/1)	(27.29)		1.88	(29.57)		2.65
Incident outcome			1.17			0.76
Survived	(63.08)			(69.65)		
Died by suicide	(29.21)			(24.05)		
Killed by law enforcement	(5.61)			(4.58)		
Suicide attempt	(1.87)			(1.53)		
Accidental death	(0.23)			(0.19)		

Exceptional Cases

As noted in the examination of incident characteristics, there is a small number of exceptional cases in this population in which an offender killed an extra-ordinary number of people. The 95th percentile of cases – incidents which had 10 or more fatalities – have a greater proportion of public mass shootings (83.35%) and ideological-motivation (41.17) than the overall population. Given this significant difference in the circumstances of the offense, I wanted to know if the victims in these high-fatality cases – and the offenders who committed them –

differed from the overall mass murder event population. The mean age and sex of the victims – as shown in Table 4.5 – did not differ significantly from the overall victim population. However, the distribution of racial categories did change significantly: Black victims are represented 20% less in the high-fatality cases, with the increase distributed primarily among White and Hispanic/Latino victims.

Table 4.5: Victim characteristics (N = 338)

	Mean (%)	SD	% Missing	Valid N
Age	35.11	18.43	0.00	338
Sex			0.00	338
Male	(56.51)			
Female	(43.49)			
Race			1.47	333
American Indian or Alaskan native	(0.59)			
Asian	(5.92)			
Black	(6.80)			
Hispanic/Latino	(18.05)			
Middle Eastern	(1.78)			
Multiracial	(0.29)			
White	(65.09)			

The high-fatality offenders – represented in Table 4.6 – also vary from the overall population in the distribution of racial characteristics. There was greater representation of White offenders and smaller proportion of Black offenders among this subset, compared with the total, to-date statistics. In addition, a smaller proportion of the offenders in the high-fatality group survived the event (1/3) compared to the full population (2/3). It therefore appears, at this univariate level of analysis, that extraordinary mass-murder offenses differ in terms of who is committing them and the individuals that are being targeted. Further multivariate analysis – explored later in this chapter – is needed, however, to fully understand these relationships.

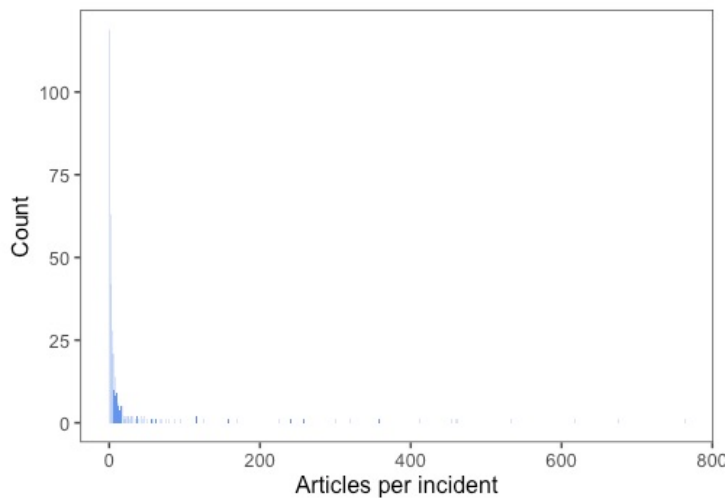
Table 4.6: Offender characteristics (N=18)

	Mean (%)	SD	% Missing
Age	31.50	11.90	0.00
Sex			0.00
Male	(88.89)		
Female	(11.11)		
Race			0.00
Asian	(22.22)		
Black	(11.11)		
Hispanic/Latino	(5.56)		
Middle Eastern	(11.11)		
White	(50.00)		
Prior arrest (0/1)	(33.33)		0.00
Prior incarceration (0/1)	(11.11)		0.00
Incident outcome			0.00
Survived	(33.33)		
Died by suicide	(38.89)		
Killed by law enforcement	(22.22)		
Suicide attempt	(5.56)		

Characteristics of News Articles

The distribution of articles written about the murder incidents – the dependent variable in the quantitative portion of this dissertation - is highly skewed as demonstrated in Figure 4.4. It is both zero-inflated - 119 incidents (27%) were not covered in any of the seven newspapers– and highly dispersed, with one event was written about in 763 separate articles.

Figure 4.4: Histogram of Total Articles per Event



The mean number of articles per mass murder was just under 22, as shown in Table 4.7. However, these events were not covered equally across the seven newspapers examined. Mean coverage was highest in the *New York Times* and the *Washington Post*, with each paper's mean articles per event greater than 4, and lowest at the *Minneapolis Star-Tribune*, with an average under one. The standard deviations for each paper were large in comparison to the mean, both in part to the few events that received exceptionally large coverage and the 27% of events that did not receive any coverage.

There was less variation among the papers in the mean number of front-page articles produced per event. While the average for the group of 7 papers was 3.9, no individual paper had a mean for Front Page coverage greater than one.

Table 4.7: Mean Articles per Event

	Mean	SD
Total	21.94	82.48
<i>Boston Globe</i>	1.89	9.09
<i>Houston Chronicle</i>	3.34	11.49
<i>Los Angeles Times</i>	3.91	15.94
<i>Minneapolis Star-Tribune</i>	0.86	6.69
<i>New York Times</i>	4.44	18.54
<i>Seattle Times</i>	2.52	7.90
<i>Washington Post</i>	4.98	22.18
Front Page	3.93	16.79
<i>Boston Globe</i>	0.30	1.74
<i>Houston Chronicle</i>	0.62	2.92
<i>Los Angeles Times</i>	0.67	3.23
<i>Minneapolis Star-Tribune</i>	0.23	1.69
<i>New York Times</i>	0.80	4.10
<i>Seattle Times</i>	0.44	1.84
<i>Washington Post</i>	0.86	3.98

Bivariate Statistics

To begin comparing the characteristics of mass murder events with their news coverage, I conducted bivariate analyses between the primary independent and dependent variables. The hypotheses for this research question, explained in greater detail in Chapter 2, are as follows:

H1: The number of fatalities is positively correlated with the amount of news coverage devoted to a mass murder event

H2: Ideologically motivated mass murder events will receive greater coverage than non-ideologically-motivated mass murders

H3: Public mass shootings will receive greater coverage than familicides and felony-related mass murders

H4: Non-white mass-murder offenders will receive greater news coverage than white mass-murder offenders

H5: Events in which the majority of victims are (a) white, (b) adolescent, and (c) female will receive greater news coverage

Table 4.8 displays correlation analyses between all continuous independent variables and dependent variables *Total Articles* and *Front Page Articles*. T-tests are not included as the data are representative of a population. These correlation statistics suggest there is a strong relationship between the number of fatalities, supporting H1, and overall news coverage of an event, but there is no relationship between the number of offenders and newsworthiness decisions. There is a positive relationship between the mean victim age and the number of articles, but the relationship between the proportion of female to male victims and news coverage is negligible.

Table 4.8. Correlations between Continuous Independent Variables and Dependent Variables Total Articles and Front-Page Articles

	<i>Correlation</i>
<i>Total Articles</i>	
Total fatalities	0.67
Number of offenders	-0.06
Mean victim age	0.11
Proportion of female to male victims	-0.06
<i>Front Page Articles</i>	
Total fatalities	0.62
Number of offenders	-0.05
Mean victim age	0.11
Proportion of female to male victims	-0.06

Table 4.9 presents the mean *Total Article* and *Front Page* coverage for each set of categorical variables. In support of H2, ideologically motivated mass murders received significantly higher total coverage and front-page coverage, on average, than non-ideologically

motivated offenses. Public mass shootings equally received greater average coverage than non-public mass shootings.

Table 4.9: Mean Total Articles and Front-Page Articles for Categorical Independent Variables

	<i>Mean Total Articles</i>	<i>Mean Front Page Articles</i>
<i>Public Mass Shooting</i>		
Public mass shooting	106.96	20.89
Non-public mass shooting	4.47	0.45
<i>Terrorism</i>		
Ideologically motivated	162.83	33.63
Not ideologically motivated	13.92	2.25
<i>Felony-related</i>		
Felony-related murder	3.18	0.22
Not felony-related murder	28.72	5.25
<i>Weapon</i>		
Firearm	32.86	6.14
Knife	3.05	0.05
Arson	4.94	0.27
Other weapons	13.86	2.43
Use of multiple weapon types	4.82	0.55
<i>Offender identified</i>		
Identified	23.63	4.25
Unidentified	2.74	0.35
<i>Offender Death</i>		
None	16.78	2.96
One or more	30.16	5.32
<i>Offender Race</i>		
American Indian or Alaskan native	44.14	9.00
Asian	68.24	13.33
Black	10.19	1.59
Hispanic/Latino	5.46	0.70
Middle Eastern	154.29	33.57
Multiracial	63.33	15.67
White	29.77	5.19
Mixed group	2.68	0.05
<i>Victim Race</i>		
American Indian or Alaskan native	5.67	1.33
Asian	7.44	1.06
Black	7.30	1.06
Hispanic/Latino	2.56	0.13
Middle Eastern	9.67	1.33
Multiracial	0.00	0.00
White	14.53	2.34
Mixed group	55.67	10.89

Table 4.9 (cont'd)

<i>Intimate-partner violence</i>		
Intimate relation between offender and victim	4.84	0.59
No intimate relationship	28.28	5.18
<i>Family violence</i>		
Familial relation between offender and victim(s)	9.88	1.41
No familial relationship	28.93	5.40
<i>Stranger</i>		
No relationship between offender and all victims	54.44	10.22
Offender and one or more victim(s) known to each other	6.97	1.05
<i>Location Type</i>		
Public	69.70	13.60
Residential	3.69	0.34
Mixed	38.49	6.59
<i>Region</i>		
Northeast	26.00	4.04
Midwest	7.05	0.98
South	25.33	4.84
West	31.79	5.84
<i>Municipality Size</i>		
0 thru 49,999	18.80	3.50
50,000 thru 99,999	14.05	2.79
100,000 thru 249,999	25.44	4.92
250,000 thru 499,999	35.53	6.26
500,000 thru 999,999	24.51	4.56
1,000,000 +	28.70	5.03
Multiple locations	8.27	0.36

Offender race appears to be a variable that is highly influenced by a series of exceptional cases. For example, American Indian or Alaska Native offenders made up less than 2% of the known offenders in this population (see Table 4.4), yet the events these offenders participated in received an average of 44 total articles and 9 front page articles. Offenders of Middle Eastern backgrounds equally made up less than 2% of the population, and yet the events these individuals participated in were covered, on average, in 154 articles and made the front page 33

times. Thus, race, and the other variables shown in this section, can only be fully understood by examining a multivariate model.

Multivariate Analysis

Given the proportion of events that did not receive any coverage in the seven sampled newspapers (27%), I began my multivariate analysis by recoding the dependent variable *Total Articles* to a binary variable indicating the presence or absence of any coverage and conducting a binary logistic regression model with hypothesized independent variables and controls. The results of this model are shown in Table 4.10. This model demonstrates that there are some significant differences between the events that did and did not receive coverage. A one-unit increase in the number of fatalities was associated with a 624% increase in the likelihood of an event being covered. Events in which the offender used a knife or other weapons were more than 800% more likely to be covered than mass murders committed by arson. And, while Black offenders were 30% more likely to receive coverage than White offenders, White victims were more likely to receive coverage than all other victims.

Table 4.10: Logistic Regression of Any Coverage

	Coefficient	Odds Ratio	S.E.
<i>Fatalities</i>	1.98	7.24	0.36
<i>Public mass shooting</i>	0.00	1.00	0.65
<i>Terrorism</i>	-1.12	0.33	0.87
<i>Felony-related</i>	-0.47	0.63	0.41
<i>Weapon^a</i>			
Firearm	0.81	2.25	0.58
Knife	2.26	9.58	0.89
Multiple	0.38	1.46	0.57
Other	2.24	9.39	1.01
<i>Region^b</i>			
Northeast	1.71	5.53	0.53
South	0.25	1.28	0.33
West	1.03	2.80	0.48

Table 4.10 (cont'd)

<i>Location Type</i> ^c			
Private residence	-1.50	0.22	0.47
Multiple	-2.05	0.13	0.63
<i>Offender Race</i> ^d			
Black	0.27	1.31	0.50
Hispanic/Latino	-0.68	0.51	0.61
Other	-0.10	0.90	0.49
Unknown	0.04	1.04	0.65
<i>Offender outcome</i>			
Offenders survived	-0.76	0.47	0.38
Unknown	-1.19	0.30	0.56
<i>Victim Race</i> ^d			
Black	-0.57	0.57	0.49
Hispanic/Latino	-0.15	0.86	0.65
Other	-0.17	0.84	0.41
<i>Mean victim age</i>	-0.02	0.98	0.01
<i>Proportion female (1) to male (0) victims</i>	0.25	1.28	0.57
<i>Family violence</i>	-0.28	0.76	0.37
<i>Intimate partner violence</i>	0.48	1.62	0.36
<i>Stranger</i>	0.48	1.62	0.41
<i>Intercept</i>	-6.02	0.00	1.76

^a Reference category: Arson

^b Reference category: Midwest

^c Reference category: Public location

^d Reference category: White

While this model presents a step towards answering RQ1, there are some statistical problems that need to be addressed. First, an examination of the VIF values shows that victim and offender race are highly correlated. To correct this problem, I created a new variable *Offender x Victim Race* that represents the interaction between the offender and victim(s) racial identities in each event. The distribution of this variable is shown in Table 4.11.

Table 4.11: Distribution of Offender x Victim race (N=435)

<i>Offender x Victim Race</i>	
Black x Black	19.78
Black x White	2.53
Black x Other	8.74
White x White	27.13
White x Black	0.92
White x Other	9.43
Other x Black	3.45
Other x White	5.52
Other x Other	22.53

Second, recoding *Total Articles* to a binary variable significantly reduces important variation in the dependent variable – values ranging from 1 to 763 are compressed to the same value. I therefore turned to count models that can account for over-dispersed and zero-inflated data. There are two common types of count distributions– Poisson and Negative Binomial Regression – and two frequently used methods to deal with zero-inflation in data – zero-inflated and hurdle models. The distribution and zero-inflation method can be combined to produce four combinations: Zero-inflated Poisson (ZIP), Zero-Inflated Negative Binomial (ZINB), Poisson Hurdle (PH) and Negative Binomial Hurdle (NBH). A negative binomial distribution is most appropriate for these data, as it can account for the overdispersion of the dependent variable: unlike the Poisson distribution, the Negative Binomial distributions does not assume that the variance of the data equals the mean (Gardner et al, 1995).

The difference between Zero-Inflated and Hurdle models lies in the assumptions of where zeros come from. ZI models assume there are two sources of zeros: structural and sampling (Lambert, 1992). Structural zeros represent those cases that will always be zero. A sampling zero is a case in which a subject had the opportunity to exhibit the behavior of interest but did not do so. For example, suppose a researcher is measuring the number of fish caught at a pond each day.

Days in which no one comes to the pond, and it is impossible for fish to be caught, are examples of structural zeros. Days in which someone does fish, but fails to catch anything, are sampling zeros.

Hurdle models, in contrast, assume that zeros are only due to structural factors. That is, there is some binary threshold that must be crossed, and anything that crosses that boundary will have a positive value (Xin Feng, 2021). An example use case of this model is measuring the number of times a sampled group of people visits the doctor in a year. Some number of respondents will not have visited the doctor at all – the binary threshold – while all other respondents will have some positive value of one or greater.

The newspaper data considered in this study – and the process by which news organizations choose to cover events – appear best suited to a Hurdle model. When considering any event, journalists and editors must make a binary decision if it is worthy of their time, resources, and space in the paper. Following that binary decision of newsworthiness, an event can be covered once or repeatedly. The zeros are always reflective of awareness of an event and intentional decision making.

The Negative Binomial Hurdle model of *Total Articles* is presented in two tables. Table 4.12 displays results of the zero-hurdle model, in which all cases are included but the dependent variable is recoded to a binary 0/1 for the absence or presence of any coverage. Table 4.13 shows results of the truncated count model, which excludes all cases that have a zero value on the dependent variable.

Table 4.12.: Zero Hurdle Model (Binomial with logit link)

	Coefficient	Odds Ratio	S.E.
<i>Fatalities</i>	1.92	6.82	0.36
<i>Public mass shooting</i>	0.07	1.07	0.64
<i>Terrorism</i>	-0.82	0.44	0.92
<i>Felony-related</i>	-0.40	0.67	0.4
<i>Weapon^a</i>			
Firearm	0.69	1.99	0.58
Knife	2.10	8.17	0.88
Multiple	0.28	1.32	0.58
Other	2.07	7.92	1.02
<i>Region^b</i>			
Northeast	1.68	5.37	0.53
South	0.24	1.27	0.33
West	1.02	2.77	0.48
<i>Location Type^c</i>			
Private residence	-1.46	0.23	0.46
Multiple	-1.97	0.14	0.63
<i>Offender x Victim Race^d</i>			
Black x Black	-0.42	0.66	0.42
Black x White	0.06	1.06	0.85
Black x Other	-0.04	0.96	0.55
White x Black	-2.36	0.09	1.84
White x Other	-0.48	0.62	0.61
Other x Black	-0.63	0.53	0.72
Other x White	-0.68	0.51	0.61
Other x Other	-0.55	0.58	0.45
<i>Offender outcome^e</i>			
Offenders survived	-0.82	0.44	0.38
Unknown	-1.22	0.30	0.53
<i>Mean victim age</i>	-0.02	0.98	0.53
<i>Proportion female (1) to male (0) victims</i>	0.34	1.40	0.01
<i>Family violence</i>	-0.32	0.73	0.38
<i>Intimate partner violence</i>	0.44	1.55	0.37
<i>Stranger</i>	0.43	1.54	0.41
<i>Intercept</i>	-5.72	0.00	1.78

^a Reference category: Arson

^b Reference category: Midwest

^c Reference category: Public location

^d Reference category: White x White

^e Reference category: Offender die

Table 4.13: Count Model of Total Articles (Truncated Negative Binomial)

	Coefficient	Odds Ratio	S.E.
<i>Fatalities</i>	0.14	1.15	0.03
<i>Public mass shooting</i>	1.52	4.57	0.26
<i>Terrorism</i>	0.98	2.66	0.32
<i>Felony-related</i>	-0.53	0.59	0.25
<i>Weapon^a</i>			
Firearm	0.09	1.09	0.33
Knife	-0.24	0.79	0.46
Multiple	0.09	1.09	0.34
Other	0.44	1.55	0.43
<i>Region^b</i>			
Northeast	0.6	1.82	0.27
South	0.27	1.31	0.21
West	0.61	1.84	0.22
<i>Location Type^c</i>			
Private residence	-0.79	0.45	0.23
Multiple	-0.69	0.50	0.28
<i>Offender x Victim Race^d</i>			
Black x Black	-0.27	0.76	0.23
Black x White	-0.29	0.75	0.5
Black x Other	0.57	1.77	0.29
White x Black	0.22	1.25	0.71
White x Other	-0.17	0.84	0.26
Other x Black	-0.29	0.75	0.69
Other x White	-0.35	0.70	0.38
Other x Other	-0.32	0.73	0.22
<i>Offender outcome^e</i>			
Offenders survived	0.22	1.25	0.19
Unknown	0.01	1.01	0.28
<i>Mean victim age</i>	0.00	1.00	0.01
<i>Proportion female (1) to male (0) victims</i>	-0.03	0.97	0.32
<i>Family violence</i>	0.26	1.30	0.2
<i>Intimate partner violence</i>	-0.71	0.49	0.19
<i>Stranger</i>	-0.11	0.90	0.23
<i>Theta</i>	-0.28	0.76	0.16
<i>Intercept</i>	1.26	3.53	0.49

^a Reference category: Arson

^b Reference category: Midwest

^c Reference category: Public location

^d Reference category: White x White

^e Reference category: Offender died

First, I examined the zero-hurdle model, which helps us understand the factors correlated with the likelihood of an event receiving any coverage. This model supports the hypothesized positive correlation between the number of victims and total news coverage; for one additional fatality, the odds of an event receiving any coverage increased by 582% (H1). Hypothesis H3 is partially supported by this model: felony-related mass murders were less likely to receive any coverage than non-felony related. However, the difference in the likelihood of coverage between public mass shootings and non-public mass shootings was negligible (7%). Finally, and surprisingly, hypothesis H2 was not supported by the zero-count model: ideologically motivated mass-murders were less likely to receive any coverage than non-ideologically motivated homicides.

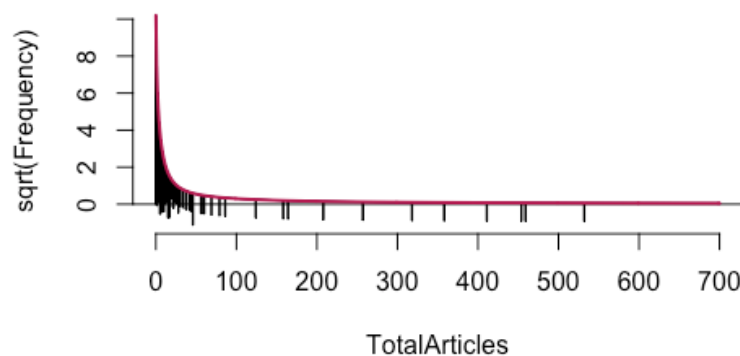
Support for hypotheses related to victim and offender characteristics was equally mixed in the zero-hurdle model. As predicted, an increase in the proportion of female victims was associated with an increased likelihood in coverage (H5). However, there was no significant relationship between mean victim age and odds of coverage (H5). Furthermore, I hypothesized that the most newsworthy victim and offender combination would be majority non-white offenders and majority white victims. Surprisingly, all combinations of offender and victim race were equally likely (Black x White, Black x Other) or much less likely to receive any coverage than the combination of White offenders and White victims.

The role of these variables – and support for the hypotheses related to RQ1 – is complicated when we turn to the negative binomial count model. As noted previously, this model removes all the cases that did not receive any coverage and considers the role of the independent variables only for positive cases. Once the coverage hurdle has been crossed, the magnitude and direction of several correlates of coverage changes significantly. The number of fatalities

remains a positive predictor, in support of H1, but the size of the coefficient decreases: a one-unit increase in fatalities is associated with a 15% increase in the number of articles in this count models. Conversely, where there was little difference in coverage decisions for public mass shootings and all other mass murders, the public mass murder variable is correlated with a significant increase in the amount of coverage an event receives. Finally, the correlate for extremism changes direction: while ideological motivation was associated with a decreased likelihood of any coverage in the zero-hurdle model, those events that do receive coverage are associated with 166% more coverage than non-ideologically motivated offenses.

The primary mechanism to assess goodness-of-fit for a negative binomial hurdle model is a rootogram, which plots predicted and observed values. Figure 4.5 shows the rootogram for the model of *Total Articles*, with the red line representing the expected values and observed counts showing as hanging bars. As expected, this model under-predicts the extreme-value cases.

Figure 4.5: Rootogram of negative-binomial hurdle model fitted to Total Articles data



Given the under-prediction of the right tail of this distribution, I was interested in examining these cases more closely to see what characteristics they had in common, particularly if un-measured constructs could be identified. I pulled the top 5% of cases on the *Total Articles* variable (more than 75 articles), which resulted in 22 mass-murder events. Some commonalities were immediately apparent: 21 were identified by *The Violence Project* as public mass shootings

(the 22nd was not as it was a vehicle-ramming attack), all were in public or a mix of residential and public spaces, and none had unidentified offenders.

For some of the offenses, it was immediately evident why they had received significant media attention, with fatality counts as high as 58. Nine of the mass-murders, however, had fatality counts less than 10; five of these were 6 or fewer. Consideration of these (relatively) low-fatality cases reveals some potential explanatory variables that are not present in the model. First, three of the nine cases include the targeting of public officials: the 2011 attempted assassination of Gabrielle Giffords, the targeting of military recruitment centers in Tennessee in 2015, and the shooting of police in Dallas. Another three cases are school shootings: 2005 in Red Lake, 2006 in Nickel Mines, and 2015 in Roseburg. However, the targeting of law enforcement and school shootings are present in the other 95 % of cases that don't receive exceptional coverage.

Table 4.14: Low fatality, high coverage cases

Date	Location	Fatalities	Number of Articles
3/21/2005	Red Lake, MN	9	225
10/2/2006	Nickel Mines, PA	5	79
1/8/2011	Tucson, AZ	6	455
6/17/2015	Charleston, SC	9	416
7/16/2015	Chattanooga, TN	5	95
10/1/2015	Roseburg, OR	9	119
7/7/2016	Dallas, TX	5	483
10/31/2017	New York, NY	8	111
6/28/2018	Annapolis, MD	5	86

In returning to the article content itself, it appears that these events received extraordinary attention not only for the characteristics of the incident, but because they resonated with a broader national conversation taking place at the moment. For example, a significant amount of the coverage surrounding the 2015 Charleston shooting at Emmanuel African Methodist Episcopal Church is not about the mass murder event at all, but attendant conversations surrounding racism, the legacy of Confederate symbols, and how to define acts of violence

committed by domestic extremists. The 2015 mass murder in Roseburg, OR – a shooting at a community college – is framed in terms of a larger national debate on gun legislation and school safety. In each of these cases, the mass murder acts as a valence point around which broader political and social conversations are centered. The missing explanatory variable, therefore, appears to be some measure of the additional newsworthy events or policy debates happening in proximity to a homicide event. These mass-murder events are not being assessed on their own ‘merits’, but in relation to the larger socio-political context of the time.

CHAPTER 5: SOURCES IN MASS MURDER REPORTING

Chapter Five examines the content of news articles about mass-murder, with a particular focus on the sources of information journalists use in their reporting. This chapter is guided by the research question: *What sources do reporters use when covering mass-murders?* In this analysis, I develop a coding scheme for mass murder article themes and assess how these categories are connected to the prevalence of unofficial and official sources. In addition, I examine the framing of mass-murder as a crime-control problem.

Qualitative Dataset

As noted in Chapter Three, the qualitative portion of this dissertation examines a subset of sixty-seven mass murder events that took place in the major metropolitan regions covered by the seven newspapers under analysis. This subset allows for a comparison of how local and non-local reporters source the same event.

While the incidents utilized for qualitative analysis were thus geographically different from the full population of mass-murder incidents detailed in Chapter 4, other relevant event, victim, and offender characteristics were similar. As shown in Table 5.1, comparing incident-level characteristics between the full population and the qualitative subset, the only marked difference is the subset has a smaller number of extreme-fatality cases (Mean = 4.89; SD = 1.74).

Table 5.1: Incident-level characteristics of the qualitative sample (N=67)

	Full Population		Subset	
	Mean (%)	SD	Mean (%)	SD
Public mass shootings	(17.24)		(19.40)	
Ideologically motivated	(5.52)		(2.99)	
Felony-related	(19.00)		(20.30)	
Victims per incident	5.22	4.17	4.89	1.74
Offenders per incident	1.29	0.78	1.34	0.96
<i>Weapon Use</i>				
Firearm	(60.46)		(56.70)	

Table 5.1 (cont'd)

Knife	(4.37)	(4.48)
Arson	(7.59)	(7.46)
Other	(4.83)	(4.48)
Use of multiple weapon types	(22.76)	(26.90)

A comparison of the full population and subset victim characteristics are depicted in Table 5.2. The victims represented in the qualitative sample resembled the full population, with the exception of race; 10% fewer victims were white in the qualitative subset than the full population.

Table 5.2: Characteristics of victims in the qualitative subset (N=329)

	Full Population		Subset	
	Mean (%)	SD	Mean (%)	SD
Age	30.39	20.07	31.29	20.75
Sex				
Male	(53.15)		(53.49)	
Female	(46.85)		(46.50)	
Race				
American Indian or Alaskan native	(1.48)		(2.44)	
Asian	(5.23)		(9.15)	
Black	(26.61)		(23.20)	
Hispanic/Latino	(14.40)		(20.40)	
Middle Eastern	(1.21)		(3.05)	
Multiracial	(1.29)		(2.44)	
White	(49.78)		(39.30)	

Finally, Table 5.3 compares the offender characteristics of the qualitative sample with the full population. As with the victim group, there are fewer white offenders represented among the qualitative subset than the total population. A higher proportion of the subset offenders were also incarcerated in comparison to the total offender group.

Table 5.3: Characteristics of offenders in the qualitative subset (N=86)

	Total Population		Subset	
	Mean (%)	SD	Mean (%)	SD
Age	31.62	10.56	28.98	8.75
Sex				
Male	(93.56)		(94.19)	
Female	(6.44)		(5.81)	
Race				
American Indian or Alaskan native	(1.92)		(2.33)	
Asian	(4.41)		(8.14)	
Black	(38.89)		(37.20)	
Hispanic/Latino	(14.56)		(25.60)	
Middle Eastern	(1.34)		(2.33)	
Multiracial	(0.57)		0.00	
White	(38.31)		(24.40)	
Prior arrest	(55.81)		(51.28)	
Prior incarceration	(29.57)		(48.72)	
Incident outcome				
Survived	(69.65)		(68.70)	
Died by suicide	(24.05)		(22.90)	
Killed by law enforcement	(4.58)		(2.41)	
Suicide attempt	(1.53)		(6.02)	
Accidental death	(0.19)		(0.0)	

This subset of 67 events was covered in 1,269 articles, 814 of which represented local coverage and 455 non-local coverage. While not anticipated at the outset, it became clear when organizing and reading through the articles that there were patterns in topic selection and framing across the articles. I engaged in an iterative process of reading through the articles and identifying topic themes. Sub-themes were condensed into higher-level topics through rounds of analysis until saturation was reached and distinct themes emerged. These categories are mutually exclusive and were applied based on a consideration of the headline, the lead, and the number of paragraphs devoted to a theme.

Table 5.4: Article themes

Category	Description	Frame
Background	Provides contextual information to the reader to better understand the location in which the homicide event happened, the type of offense, the community targeted, etc.	Thematic
Column or Editorial	An opinion piece written by a columnist or the editorial team.	N/A
Community response	A description of how the homicide event has impacted a geographic, religious, or shared-interest community.	Thematic
Hero profile	A narrative detailing the efforts of a first responder or bystander to stop and offender or aid a victim. Will typically use the word “hero” to describe the individual.	Episodic
Mention	The article is about another event or series of events and mentions the mass murder in passing.	Episodic or Thematic
News roundup	Short, 3-5 sentence summary listed with other news items. Often pulled from wire reports	Episodic
Offender profile	A story describing the life of the offender prior to the offense. Typically develops a narrative connecting past behavior to the current offender status.	Episodic or Thematic
Policy response	Focused on political figures response to the homicide event. May examine the feasibility of past or future legislation.	Thematic
Straight news	A narrative providing the most up-to-date information on how a homicide event happened and who was involved	Episodic
Victim profile	A story describing the life of one or more of the victims	Episodic

The distribution of article themes across both local and non-local news is shown in Table 5.5

Unsurprisingly, episodic *Straight news* articles are the most common type of reporting across both local (36%) and non-local newspapers (42%). However, 2nd and 3rd ranking categories expose some of the significant differences in local and non-local reporting on mass murders. The second most frequent type of article in non-local reporting are *News roundup* articles (18%) – short, episodic summaries of events typically compiled from wire reports. In contrast, there is

near equal representation between *Victim profiles* (12%), *Community response* (12%) and *Column/Editorial* (11%) categories in local sources. These three categories - attempts at providing greater contextualization of an event and its consequences - require the historical knowledge and relationships developed by a local reporter. From this thematic analysis, it is evident that reporting about a mass-homicide event from the local paper of record will provide a more nuanced view of an event than non-local coverage.

Table 5.5: Percentage of Article Type by Local and Non-Local Source Coverage

	Local Sources (N=814)	Non-Local Sources (N=455)
Background / Explainer	3.69	4.40
Column / Editorial	10.57	8.79
Community Response	11.92	5.93
Hero	2.33	0.88
Mention	8.35	7.03
News	35.38	41.54
News Roundup	5.04	17.58
Offender profile	4.42	3.74
Policy response	6.63	7.25
Victim profile	11.67	2.86

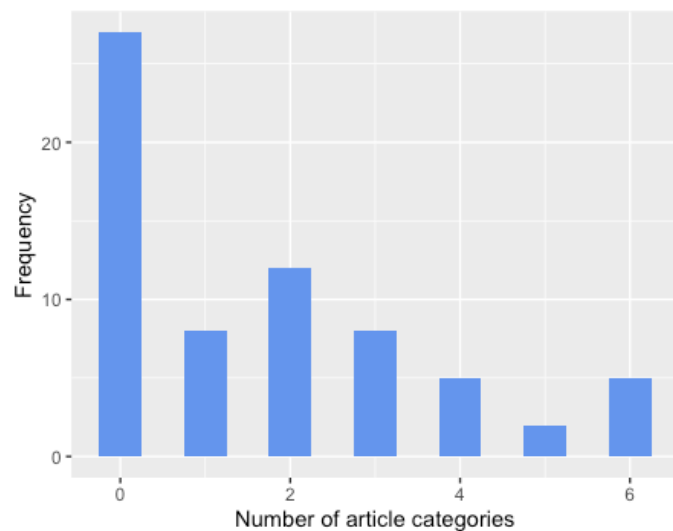
The statistics in Table 5.5 are presented at the level of analysis of the article. However, Chapter 4 demonstrated that these articles are not equally distributed among mass-murder events. When we examine the distribution of these document categories at the incident level – examining each category as a proportion of the overall coverage per incident – it becomes apparent that the distribution of these article themes is affected by the overall skew of the dataset. As demonstrated in Table 5.6, while over 90 % of the sample had one or more articles in the *Straight News* category, only 15% of cases had one or more *Background/Explainer*, *Hero*, and *Policy Response* articles.

Table 5.6: Mean Articles per Event

	Mean	SD	N
Background / Explainer	3.38	3.86	13
Column / Editorial	5.25	7.47	24
Community Response	4.00	5.91	31
Hero	2.88	2.64	8
Mention	10.71	9.58	7
News	7.82	8.29	61
News Roundup	2.88	2.07	42
Offender profile	2.30	3.24	23
Policy response	7.91	9.82	11
Victim profile	3.50	4.38	31

To better understand the distribution of these article types, I took six of the categories that were not evenly distributed across the incidents – *Background / Explainer*, *Community Response*, *Hero*, *Offender profile*, *Policy response*, and *Victim profile* – and created a new binary variable for each coding for presence or absence. I then created a variable summing these six binary variables; each incident could receive a score from 1-6 indicating how many ‘additional’ types of news articles were written about the event beyond straight news or news roundup. A histogram of the distribution is presented in Figure 5.1. As expected, the most represented category was 0, with 40% of events not receiving any coverage in these additional reporting categories. On the other end of the distribution, 5 events had at least one article in all six categories. This summative category variable was highly correlated with total fatalities (0.67) and total articles (0.70), suggesting that diversity of coverage may be another indicator of newsworthiness.

Figure 5.1: Histogram of Number of Article Categories per Event



After coding the full sample according to the article topic coding scheme, 200 local and 200 non-local articles were randomly selected to further code for sources.¹² As detailed in the Chapter 3, each unique source of information in an article was identified and coded. While some categories of speakers were anticipated by the literature (ex. law enforcement, witnesses, lawyers) a significant portion of coding was emergent. For example, a “community member” code was implemented to capture the recurring number of individuals who had no direct connection to the criminal event but provided statements about how the homicides had impacted their community. A full list of speaker codes, their descriptions, and frequency is shown in Table 5.7.

¹² Editorial/column and Mention categories were excluded when sampling.

Table 5.7. Speaker codes

Code	Description	Official / Unofficial	Frequency (N=2002)
Advocacy	Members of special interest groups or NGOs advocating for specific policy positions.	Unofficial	1.5
Community member	An individual who is connected to a mass murder's offender, victim(s), or witnesses geographically or socially but does not themselves fall into one of those categories.	Unofficial	9.5
Expert	An individual <i>without direct connection to the event</i> being solicited for their subject matter expertise. Typically identified as an "expert" in the text.	Official	5.5
Health care	EMTs, physicians, or hospital representatives who are caring for victim(s) or the offender	Official	1.5
Knew offender	An individual who knew one or more offenders prior to the mass-murder event	Unofficial	6.9
Knew offender & victim	An individual who knew the offender and one or more victims prior to the mass-murder event	Unofficial	3.7
Knew victim	An individual who knew one or more victims prior to the mass-murder event	Unofficial	16.4
Law enforcement	A current member or representative of a local, state, or federal law enforcement agency.	Official	23.7
Criminal-legal system	Any representative of the criminal justice system, excluding law enforcement. Includes lawyers, judges, prison officials, etc.	Official	5.6
Medical examiner or coroner	The individual who determines the cause of death and conducts autopsies of victims	Official	1.5
Offender	Direct quotes from surviving offenders	Official	4
Other		Unofficial	3.4
Public official	Elected officials and government bureaucrats	Official	12.0
School official	Representatives of a school or school district, including teachers and members of administration	Official	2.1
Witness	Any individual besides the offender and victims who witnessed the mass-murder event. May experience a non-fatal injury.	Unofficial	5.9

In addition to individual speakers, journalists frequently cited various documents or descriptions of audio-visual material as sources of knowledge in their reporting. The codes used to classify these document types are displayed in Table 5.8.

Table 5.8. Document Codes

Code	Description	Frequency (N=486)
Audio-visual	Transcripts of phone calls or videos	3.3
Community notes	Posters or notes left at the location of a murder in support of victims	3.7
Court records	Any document produced by the criminal-legal system. Includes but is not limited to arrest warrants,	15.0
Online communication	Information posted online, shared on social media, through text, or in email	13.4
Other article	Information is cited from another news publication	25.3
Other document		5.1
Public records	Information pulled from government records and reports	8.8

Local and non-local sources had relative parity in the number of unique speakers and documents cited in the sampled articles, as demonstrated in Table 5.9. However, there are significant differences in *who* and *what* is being cited by local and non-local reporters. In addition, the use of sources is highly dependent on what type of article is being produced.

Table 5.9. Mean unique source per article

	Local Coverage	Non-local coverage
Documents cited	1.14	1.21
Speakers	5.73	5.07

First, I examined the difference in the use of official and non-official sources compared across local and non-local papers. Non-local papers, on average, relied on official sources to a greater degree than local papers, as shown in Table 5.10. The largest discrepancy was in the citation of law enforcement sources – local newspapers cited an average of one (1.0) law enforcement official per article, while non-local papers cited them an average of 1.4 times per article. Local news sources had an advantage in their access to unofficial sources, particularly

individuals who could speak to the lives of the victims. Local news articles cited 1.4 who knew a victim, on average, compared to a mean of 0.4 in non-local coverage.

Table 5.10: Mean unique source per article: Official x non-official; Local x non-local

	Local Coverage	Non-local coverage
Official sources	2.42	2.80
Non-official sources	3.03	1.17

I next considered the use of official versus unofficial sources across different article types, being mindful that these categories are not equally distributed among all the mass murder events. As demonstrated in Table 5.11, *Straight News* – the most common articles in the dataset – relied more on official than unofficial sources. Unofficial sources become more prevalent when considering less frequently occurring article types including *Hero*, *Community Response*, *Offender profile* and *Victim profile*. Given the relative infrequency of these categories, as indicated previously, this suggests that a diversity of sources is correlated with total news coverage. Stated differently, less newsworthy incidents not only receive quantitatively fewer articles, but also a qualitative orientation towards official sources and viewpoints.

Table 5.11: Mean unique sources per article type

	Official Sources	Unofficial Sources
Background / Explainer	2.84	1.12
Community Response	1.48	3.43
Hero	0.75	3.33
News	3.19	2.15
News Roundup	1.02	0.18
Offender profile	3.25	4.45
Policy response	4.96	1.79
Victim profile	1.04	6.26

Straight news articles are highly dependent on law enforcement for information, citing an average of 1.80 unique sources per article. The ‘typical’ version of this article features law

enforcement and one or more additional official sources providing factual updates, with unofficial sources – individuals who knew the victim(s) or offenders, community members, and witnesses to the offense – cited for their personal reflections. As noted previously, these are highly episodic stories – the incident is considered in isolation, without examining its connection to other events or policy decisions.

Social Media

Reporters utilized social media sparingly in comparison to other source types. As demonstrated in Table 5.12, social media or internet sources were cited on average fewer than one time for all article types except for those profiling murder victims. Social media was rarely used to provide factual details about the mass murder event itself; only official law enforcement social media accounts were used for this purpose. For example, the *Seattle Times* provided an updated figure on the number of individuals wounded in an attack based on a tweet from the Houston FBI account. (Weber & Lozano, 2018). Journalists more commonly used social media to provide supplementary information about offenders, victims, or witnesses.

Table 5.12: Mean unique social media or internet sources per article category

	Mean
Background / Explainer	0.32
Community Response	0.08
Hero	0.75
News	0.29
News Roundup	0.00
Offender profile	0.25
Policy response	0.38
Victim profile	1.33

Reporters shared public posts primarily from Facebook and YouTube memorializing victims when the information couldn't be obtained through a traditional interview. For example,

following a shooting in Santa Fe, Texas, reporters at the *Houston Chronicle* published posts from friends and family memorializing the victims, including:

“Chris Stone, a 17-year-old, described by a friend on Twitter as ‘such a sweet and funny boy (who) always knew how to make anyone laugh.’”

“Tisdale, who was 67 and married, had three children and several grandchildren, is ‘now safe in the arms of Jesus,’ a niece wrote” (Gordon & Rhor, 2018).

This article was published only one day after the shooting, suggesting that social media served as an information subsidy during a period when it would not be feasible to directly interview individuals affected. Social media was also used to provide biographical information on both offenders and victims that could not be obtained through official sources. This primarily took the form of using profiles like Facebook and LinkedIn to identify information about an individual’s education and employment history. In a few cases, reporters identified the social media profiles of the offender and utilized photos and text posts to gain some insight into the motivations of the individual.

Anonymity

An unanticipated finding of this qualitative analysis was the number of ways journalists obscured sources of information. Articles attributed information to “officials” (N=54) or “authorities” (N=109), which refused the reader the opportunity to assess the credibility and relevance of a source. For example, in an article discussing the shooting of multiple police officers, a journalist wrote, “as the officers made their way along the wall, officials said, the suspect popped up and shot Veenstra from about 10 to 15 feet away, hitting him in the face” (Winton et al, 2008). In this sentence, ‘officials’ could be representatives of any number of law enforcement agencies or government officials. It is unclear how the officials received this

information and their proximity to the investigation. Without these details, the reader is unable to assess the credibility of this source and is forced to rely on the journalist's assessment that the information is reliable.

In a few exceptional cases, the format of the story itself obscured how information was obtained. In a few articles, journalists appeared to experiment with their writing style, composing the article as a 3rd-person narrative. An example appears in the *Houston Chronicle*, writing about a train derailment:

“Some, such as Los Angeles County sheriff's Deputy James Tutino, rode only a few times a month. Some rode every day; [Elaine] Watson had taken the 25-minute ride from Northridge to Glendale to her job at an insurance company for four years.

‘GLEN-DALE,’ the conductor's voice bellowed, as always, and she slid her book back into her bag, then rose to wait by the door.

But the train didn't slow.

‘There's something really wrong here,’ Watson thought, hurrying back to her seat. As rocks banged the sides of the train, she braced herself as best she could, feet dug into the floor, hands tightly grasping a metal pole in front of her.” (Wagner, 2005)”

The rest of the article, and others like it, continue in this style. Because the article is written as a story the reader cannot tell where the information being reported came from. Did Deputy James Tutino tell the reporter directly he rode the train a few times a month, or was that Elaine Watson's observation? To what extent is the final paragraph of the excerpt reflective of Elaine Watson's recollections, and how much is the author editorializing? To be clear, this divergence from form was rare, but highlighted the importance of source attribution in allowing

the reader to make an independent assessment of the reliability and veracity of information contained in an article.

Exceptional Cases

While episodic treatment of mass-murders is the norm, highly newsworthy events can engage in more thematic framing. As noted previously, 11% of the events in this qualitative sample had one or more articles written about the policy impacts of the mass-murder event, and 46% considered the impact on the larger community. If exceptional mass-murder events provide an opportunity for voices outside of official debate to introduce novel viewpoints, as suggested in Chapter 2, the opportunity to do so would be in these spaces. I therefore engaged in a close reading of these articles in the random sample – analyzing the frames used by unofficial and official sources to make sense of the events.

In their comments, public officials framed mass murder events as a problem of public safety: the policy objective is to protect other communities from experiencing similar violence, rather than interrogating and addressing the causal factors that led an offender to engage in the violence itself. Some public officials went so far as to suggest that there was some level of baseline ‘lawlessness’ or ‘evil’ that government may be unable to root out. Following a 2004 quadruple homicide, the Mayor of Newark was quoted as saying, “This was an isolated crime and not a threat to public safety... You can't stop crimes like these, crimes of retaliation. Human beings are human. They are not divine. Violence begets violence" (Gettleman, 2004). D.C. Mayor Muriel Bowser described a 2015 mass-shooting at the Navy Yard as “an act of evil” (Herman et al, 2015). The behavior of offenders was incomprehensible and thus unable to be addressed.

The policy solutions put forward, therefore, were firmly rooted in conceptions of crime control and prevention. For example, following a shooting at Santa Fe High School in 2018, multiple Texas legislators expressed support for target-hardening of schools and various degrees of firearms restrictions. Senator Ted Cruz told the *Houston Chronicle* that lawmakers need to, "be doing everything humanly possible to stop this from ever happening again, to stop violent criminals to stop them from getting firearms, to stop them from getting access to schools, to stop them from illegally purchasing firearms." (Matos, 2018). Mayor Mike McGinn of Seattle, following a mass-shooting in 2012, "pledged to redouble efforts to deploy police patrols, encourage residents to cooperate as witnesses and address 'the culture of violence ... in which people think it's OK to go out with a gun and settle a dispute'" (Murphy, 2012). Public officials suggested increased penalties for building code violations in response to arson (Newman, 2010) and additional surveillance of home-schooled students after a mother killed her children (Gross, 2008). In each of these cases, the approach from officials was to utilize the tools of the criminal-legal system to reduce opportunities for offending, rather than addressing the causes of the violence itself.

In most cases, unofficial sources similarly viewed the mass-murder events as public safety problems that required law enforcement intervention. Many of the community members quoted in the sampled stories speak to their sense of personal safety – or lack thereof – after the mass murder event. One resident told a reporter, "Stuff like that doesn't happen here" following a 2011 shooting in Seal Beach, CA (Santa Cruz & Rojas, 2011). Following the murder of a family in Winchester, MA, a community member told the *Boston Globe*, "We're all just sick. Everybody's in shock" (Bailou, 2010). To these community members, the mass murder event

was unanticipated and unpredictable. Given that unpredictability, they equally provide a variety of opinions on crime control measures.

Where this group differs is in their invocation of religion and community as either complimentary or alternative solutions to the problem of mass murder. For example, at a vigil for police officers killed in Parkland, WA, a community member told the assembled group, “Let’s ask how we can love more, be better parents, and how we can be better citizens” (Clarridge, 2019). Perhaps the most emblematic quote comes from a local pastor in Marysville, WA who told grieving parishioners, “What do you do after this? ... I don’t know, but I think it has something to do with loving one another” (Johnson et al., 2014). These are not policy suggestions *per se*, they do suggest that there is an imagination for intervention at the level of the offender. In contrast to policy makers, these speakers do not argue that there is some irredeemable segment of their society. Rather, they suggest that efforts on the individual or community level may serve as a protective factor against future violence. This suggests that, in these highly newsworthy mass-murder cases, there are opportunities for non-elite views to enter the news cycle.

While community members can suggest a response to mass murder that is not dependent on a crime-control lens, the views presented sources examined in the sampled articles do not move to the level of framing mass murder events in terms of societal structures. Fundamentally, the conversation is bounded by the premise that US mass-murder is a problem of individual deviance, and solutions must work on the individual level. This assumption becomes apparent when examining the coverage of a mass murder attack committed by an Uzbek immigrant in New York City. The offense was labeled a terrorist attack, and experts were consulted by journalists to provide historical and sociological analysis of Uzbek society. One article discusses

how “a blend of repressive politics and economic failure” resulted in emigration from the country (Kramer, 2017). Another set of journalists consulted academics to discuss how the treatment of Muslims in former Soviet-bloc countries was connected to the production of ISIS propaganda (Filipov & Roth, 2017). The implication is that the offender in this case is not simply ‘evil,’ nor was it the actions of any one individual – parents, peers, community members – that led to this individual’s behavior; the offender is the product of a society and its failings.

This level of structural analysis is simply not present when looking at the other cases in this dataset. The structural inequities of U.S. society – systemic racism, the lack of a social safety net, increasing anomie among youth, among many others – are not mentioned as possible explanatory variables. Within this sample of articles, the only comparable analysis is a *Community Response* article examining the blight of a neighborhood where a mass shooting took place. One community member tells a *Washington Post* reporter, “They say ‘no child left behind,’ but these children were left behind. Most were being raised by single mothers. Now this has happened. They have finally shot up the last little place in Southeast that was peaceful” (Gowen, 2010). Another resident suggested that the neighborhood children, “don’t have anything to do, no jobs, no activities” (Gowen, 2010). However, the article does not explain *why* the neighborhood has gotten to this point, nor make an explicit connection between these conditions and the acts of the mass-murder offenders. The result gives the reader a sense of the place in which this offense happened, and the ways in which the mass murder harmed an already struggling community but fails to make that final causal connection between the economic and social conditions of the neighborhood and the crime itself.

Ultimately, this thematic analysis suggests mixed support for indexing in coverage of the sampled mass-murder cases. Most events are dominated by official views in the form of law

enforcement. In these cases, unofficial voices serve to place the reader ‘in the moment’ and humanize the subjects of reporting, but do not present viewpoints that contradict with official sources. A few spectacular cases are subject to larger amounts of coverage, greater diversity in the types of coverage, and thematic discussions that seek to understand the problem of mass-murder and its attendant solutions. In these few cases, we can see the divergence of official viewpoints – which frame mass murder offending as an inherent deviance that require crime control solutions – and the community which, while not outright rejecting crime control, offers a complementary solution in the form of social support and communal values.

It remains unclear if the exclusion of structural explanations for mass murder – excluding the international exception – is explained by indexing, larger US cultural norms such as individualism, or a product of the news-making process. The origins of this individual-level bias could not be gleaned from the text itself. This likely constitutes a research project in itself and would require interaction with the process of news-making through field observation and interviews.

CHAPTER 6: CONCLUSION

The seriousness of a homicide – the number of fatalities – is the strongest predictor of newsworthiness in the literature on crime and media, reaching back to the 1960s. As reviewed in Chapters 1 and 2, scholars have attempted to identify other factors correlated with news coverage by restricting samples to low-fatality homicides or utilizing fatality count as a control variable. The central premise of this dissertation, and what has been demonstrated in the results presented in Chapters 4 and 5, is that we can learn just as much about the practice of reporting on crime from examining the most extreme cases.

The quantitative and qualitative results of this dissertation demonstrate that reporting on mass murder is like reporting on other types of violent crime: a significant percentage of events go unreported nationally and the events that are covered are subject to routines that determine the amount of coverage, how stories are written, and whose voices are included. Only a small percentage of mass murder events – by virtue of a truly extraordinary number of individuals killed or the timing of an event – break through these coverage norms and become ‘what a stories’ or ‘celebrated cases.’

The first research question – *what event, victim, and offender characteristics make a mass-murder more newsworthy*– was examined in Chapter 4 by comparing a novel, open-source dataset of mass-murder events with coverage in seven national newspapers. Using a negative-binomial hurdle model, I demonstrated that inclusion of non-coverage, average coverage, and exceptional coverage presents a more nuanced understanding of the correlates of newsworthiness. Variables that are traditionally strongly predictive of coverage – mass public shootings and ideological-motivation – have a positive association with news coverage in an overall count model but decrease the odds of any coverage when examining the zero hurdle

models. The interaction between offender and victim race was equally multifaceted when comparing the negative binomial and zero-hurdle model. White offenders and white victims and Black offender and White victims are equally likely to receive coverage, with all other racial categories less likely to receive any coverage in the news. However, among the events that do receive coverage, more articles are devoted to Black offenders and other victims and White offenders and Black victims – a correlation not anticipated by a review of the literature on media coverage on homicide.

Finally, a close examination of cases under-predicted by the model suggests that newsworthiness decisions cannot be considered in isolation: coverage decisions are equally impacted by the surrounding news environment as the elements of the event itself. Future research should explore ways to operationalize and measure simultaneous news events and the ways in which a crime event does or does not intersect with existing news narratives.

The second question posed by this dissertation – *what sources are used in mass-murder reporting* – was the subject of Chapter 5. Results of this exploratory qualitative analysis suggest that routinization leads reporters to produce episodic, just-the-facts stories based primarily on official sources. Local reporters, given their proximity to the event, add in the voices of witnesses, community members, and individuals who knew the victim to humanize their subjects, but these sources are secondary and not used as sources of fact. Surprisingly, while some scholars have documented the phenomena of ‘ambient journalism,’ social media is not a frequently used source. In the few occasions that social media was cited by journalists reporting on mass-murder, it was used as an information subsidy to provide information on victims. Future research should examine if social media plays a similar sourcing role for journalists across crime types and media.

In addition to receiving greater amounts of coverage, exceptional cases are subject to a greater diversity of story types and sources. Discussion of mass-murder as a problem, and proposed solutions, take place when an exceptional mass-murder occurs. An analysis of the frames utilized by policy makers and community members reveals that mass murder is viewed as a problem of individual deviance, and solutions are primarily framed in terms of crime-control measures and reinforcement of social bonds. The potential for societal-level framing of mass-murder events, and a different set of solutions, is revealed when examining an ideologically motivated mass murder offender who is not a US citizen. Future research on the news-making process, and a comparison of national and international coverage of homicide, may further explain this difference in framing.

Limitations

The generalizability of this analysis is limited by several factors. First, the coding of both the quantitative and qualitative portions of this dissertation was only conducted by the author, and thus there are no tests for intercoder reliability. Results of this dissertation could be strengthened by having non-subject-matter experts engage in coding of both the mass murder data and article data to ensure that the codebooks are valid and reliable. In addition, as noted in the close of Chapter 4, this dissertation did not measure other events taking place at the same time. Decisions about newsworthiness do not occur in a vacuum; homicides are assessed in relation to other events. Future research should explore ways to operationalize and measure this ambient environment.

The results of this dissertation are also necessarily limited by the choice to study legacy print media. While these sources are subject to the best archival processes, ensuring reliability of data collection, they are not the primary way that modern consumers get their news. The modern

news landscape is dominated by online news outlets that are not subject to the same resource constraints as newspapers and can be updated as new information emerges. It is plausible that these dynamics impact the role of sources – the pressure to provide information quickly, and the ability to update information if it proves inaccurate, may incentive journalists to use unofficial and social media sources to a greater extent than print news. Future research could apply the methodology described in this paper to other news media – public access and cable television, digital news, etc. – to better understand these dynamics.

Finally, decisions related to inclusion criteria and coding limits some of the inferences that can be drawn from this analysis. In building the mass-murder database, I did not include a variable measuring the number of injuries associated with each event. This was a deliberate choice due to difficulties in determining what constitutes an event-related injury and inconsistencies in reporting this information. In addition, researchers in this field have yet to propose a mechanism to capture or infer the ‘dark figure’ of injuries – individuals who are hurt at a mass murder event but don’t seek medical treatment, and thus go uncoded. A future study could investigate this variability and possible methodological solutions.

Another decision point that impacts interpretation of the qualitative portion of this dissertation is that sources in each article are coded only once. While this allows for an understanding of how deeply, or shallowly, a story was sourced, it also implicitly gives individuals with differing levels of knowledge or credibility the same weight in the analysis. Future research on sourcing can improve on this method by considering mechanisms to compare the relative importance of a source in a story – for example by the number of sentences or quotes attributed to a source - as an additional data point.

Contributions

This dissertation makes contributions to our understanding of the phenomena of mass-murder and media coverage of crime in addition to introducing methodological innovations that can be extended to future research. As noted at the start of this dissertation, our understanding of mass murder events – including their offenders and victims – is limited by a lack of valid and reliable data. To fill this gap, I developed a comprehensive open-source data set that represents that centralizes information disparately found across government, media, and scholarly sources. The result is the most comprehensive understanding of mass-murder offending we have to date. An examination of these data reveals that this is not a homogenous group of offenses. Rather, there is a set of exceptionally high-fatality cases in which the circumstances of the offense and the racial characteristics of offenders and victims differ from the “average” mass-murder.

This study also contributes to our knowledge of how news organizations cover rare criminal events. The literature on media coverage of crime is overwhelmingly focused on single-victim homicides, leaving a significant gap in our knowledge of how multiple-victim events are covered. This study shows that media reality of mass murder is composed of three elements: the events the public is never exposed to (unless one happens to live in that community), routine episodic coverage, and the few exceptional events that prompt political and social commentary. Public understanding of mass-murder – and crime writ large – is thus disproportionately influenced by the quantity and quality of exceptional event coverage.

In addition, media-crime literature has not attended to the area of sources in the last decade, even as the media landscape has drastically changed. Decreasing readership, and an associated decline in ad revenue, has increased the pressure on news organizations to produce attention-grabbing stories quickly and cheaply. Despite these forces, this study demonstrates that

legacy print media have not made significant use of social media or non-traditional voices.

Rather, official sources in the form of law enforcement, public officials, and representatives of the judicial system continue to dominate.

Finally, this dissertation makes several methodological contributions that can be extended to other studies of media coverage of crime. These include the development of an open-source mass-murder dataset, an associated dataset of over 9,500 articles from seven national newspapers, temporal matching of incident data and content, and development of a coding scheme for article topics and article sources. The process of data collection, analysis, and the coding schemes are not unique to the mass-murder context and could be adapted for other media coverage of crime. Future research endeavors include expansion and further analysis of the mass-murder dataset, additional content analysis of the article dataset, and reliability testing of the article and source codebooks.

Implications for Practice and Policy

One of the primary – and perhaps unsurprising – findings of this dissertation is that local coverage of mass murders significantly differs from reporting conducted by journalists outside of the community. Local reporters pre-existing relationships with sources allow them to produce a greater variety of story types and showcase non-official voices in their coverage. While non-local reporters may be able to build in-roads by relying on their local colleagues, this approach is becoming an increasing challenge as news outlets are closing or being bought by national conglomerates.

Reporters interested in presenting viewpoints beyond that of law enforcement or government officials after a mass murder may need to look to new solutions as they face an ever-changing media landscape. Student and citizen journalist may present a novel avenue in

identifying sources and establishing credibility. In addition, social media may be an untapped resource for understanding communities, as indicated by the results of this analysis. Ultimately, for non-local journalists to address the bias towards official sources, they must be aware of it and prepared to engage in work to address it.

The emphasis on straight-news reporting after a mass murder is also a critical piece of information for policymakers and advocacy groups. Few of the mass-murder events in this analysis generated coverage of attendant policy issues; the articles that did were limited to a relatively small range of proposed solutions. As a result, seeking elite newspaper attention may not be the best use of resources for individuals or organizations interested in generating public interest in various policy measures. Outlets such as local public radio or non-profit online outlets may provide alternatives public spaces for these discussions. Community advocates and local leaders may be best served by investing in these local resources to ensure that these conversations can reach the public.

Future Research

The data and methodology developed in this dissertation provide several avenues for future research. One significant area for development is expansion of the mass murder dataset to include additional years and the incorporation of additional variables that can be derived from open-source material including offender background and the behavior of the criminal justice system (ex. police response times, sentencing information). This dataset could be used to answer questions about mass murder rates, correlates of offending, and the treatment of these offenses by the criminal justice system. In addition, expansion of this dataset could provide the variability necessary to model more nuanced operationalizations of race and offender / victim relationships that were not possible in the current analysis.

In addition, there is more to be learned about media treatment of these crimes.

Media distortion and source analysis can be extended to other types of media, including the local papers serving the community directly impacted and web-based organizations. In addition, court coverage remains an under-examined topic, both for rare crime events such as mass murder and homicide more generally. Finally, an examination of how international outlets cover mass-murder both taking place both in the United States and in other countries may reveal societal-level norms in reporting that are not apparent when only considering domestic coverage. The methodological techniques and codebooks developed in this project can serve as a starting point to examine these variations in coverage.

Finally, this project highlighted the ways mass-murder can profoundly impact a community, including but not limited to the inundation of an area by the press. I continually returned throughout this dissertation to the events that produced extreme coverage – up to 763 articles by only seven papers – written about a crime and a place in which it occurs. How does that level of scrutiny affect the emotional health and wellbeing of the people who live in that community? Future work should not only interrogate the products of media coverage of crime but explore the process by which that work is produced. This will require the development of collaborative relationships with scholars experienced in trauma-informed methodologies, survivor groups, and journalists themselves to uncover the impacts of crime reporting and develop best-practices.

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APPENDIX

Table A.1: Description of Mass-Murder Database Variables

Variable Name	Description	Coding
Unique ID	Unique ID number	String
<i>Incident</i>	<i>Unit of analysis: Event</i>	
Date	Date the offense took place	Month / Day / Year
Weapon	The weapon type(s) used by the offender(s)	<ul style="list-style-type: none"> • Blunt object • Fire / arson • Firearm • Knife • Personal weapons • Strangulation / asphyxiation • Vehicle • Other weapon
ECDB	Was the event captured in the Extremist Crime Database?	0 / 1
TVP	Was the event captured in The Violence Project database?	0 / 1
Felony-related	Was the event committed in the process of another felony event (ex. robbery, gang-hit)?	0 / 1
<i>Location</i>	<i>Unit of analysis: Location, can be multiple for one event</i>	
Municipality name	Name of the city, town, etc where the offense took place	String
Municipality type	Smallest municipality unit in which the location is located	CDP, Town, City, Township, County
Municipality size	Size of the municipality as identified in the 2010 census	1 - N
Region	Region municipality as identified in the US Census	Midwest, Northeast, South, West
Location type	Description of the location targeted (ex. residence)	String
<i>Offender</i>	<i>Unit of analysis: Offender, can be multiple for one event</i>	
Sex	Gender identity at the time of the offense	M / F / other
Age	Age at the time of the offense	0 - N

Table A.1 (cont'd)

Race	Offender's race	<ul style="list-style-type: none"> • American Indian or Alaskan Native • Asian • Black • Hispanic/Latino • Middle Eastern • Multiracial • White • Other • Unknown
US-born citizen	Was the offender a US-born citizen?	0/1
Prior arrest	Had the offender been arrested prior to the event?	0/1
Prior incarceration	Had the offender been incarcerated prior to the event?	0/1
Incident outcome	How did the event conclude?	<ul style="list-style-type: none"> • Offender survived • Offender died by suicide • Offender killed by law enforcement • Suicide attempt • Accidental death • Unknown
Victim	Unit of analysis: Individual victim, will be 4 or more for one event	
Sex	Gender identity at death	M / F / other
Age	Age at death	0 - N
Race	Victim race	<ul style="list-style-type: none"> • American Indian or Alaskan Native • Asian • Black • Hispanic/Latino • Middle Eastern • Multiracial • White • Other • Unknown
Relationship to offender	Relationship (if any) between victim and offender	String

Table A.2: Description of Article Dataset Variables

Variable Name	Description	Coding
Unique ID	ID of the associated mass-murder event	String
Publication Title	Title of the newspaper	<ul style="list-style-type: none"> • <i>Boston Globe</i> • <i>Chicago Tribune</i> • <i>Houston Chronicle</i> • <i>Los Angeles Times</i> • <i>New York Times</i> • <i>Seattle-Times</i> • <i>Star-Tribune</i> • <i>Washington Post</i>
Date of publication	Date the article was published	Month / Day / Year
Start page	Page of the newspaper in which the article was published	String
Title	Title of the article	String
Authors	Author(s) of the article	String
Wire Service	Was the article produced by a wire service? (AP, Reuters, etc)	1/0

Table A.3: Independent Variables for Media Distortion Analysis

Variable Name	Description	Coding
Region	Census region	Midwest, Northeast, South, West
Location Type	Did the event take place at a public or private (residence) location?	<ul style="list-style-type: none"> • Public • Private • Both
ECDB	Was the event captured in the Extremist Crime Database (indicator of extremism)?	0 / 1
TVP	Was the event captured in The Violence Project database (indicator of public mass shooting)?	0 / 1
Felony-related	Was the event committed in the process of another felony event (ex. robbery, gang-hit)?	0 / 1
Number of offenders		0 - N
Group offender age	Average age of the offender(s)	0 - N

Table A.3 (cont'd)

Group offender race		<ul style="list-style-type: none"> • American Indian or Alaskan Native • Asian • Black • Hispanic/Latino • Middle Eastern • Multiracial • White • Other • Unknown
Weapon	What weapon was used in the offense?	<ul style="list-style-type: none"> • Arson • Firearm • Knife • Multiple
Number of victims	Number of individuals killed, not including the offender(s)	0 - N
Group victim gender	Proportion of male to female victims	0-1
Group victim age	Average age of the victims	0 - N
Group victim race	What is the racial makeup of the group of victims?	<ul style="list-style-type: none"> • American Indian or Alaskan Native • Asian • Black • Hispanic/Latino • Middle Eastern • Multiracial • White • Other • Unknown
Family violence	Was one or more victims a member of the offender(s) family or their child?	0/1
Intimate partner violence	Was one or more victims a romantic partner, partner's family/friends, or partner's child?	0/1
Stranger	Was one or more victims a stranger?	0/1