

Mass Shootings and Media Contagion Theory: Social Media's Influence on Frequency of Incidents

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Abstract

As the number of mass shooting and acts of violence increase nationwide, researchers have set out to determine the specific underlying cause. This study explored a pattern between two variables: the spread of mass shooting news on social media platforms, and the increase in these crimes. This study analyzed and compared media activity from mass shootings at Columbine, Virginia Tech, and Parkland. These school shootings occurred in three separate media eras, and data from a mass shooting archive was used to examine the frequency of incidents over time. Evidence showed increased social media usage aligned with increased numbers of mass shootings.

I. Introduction

Columbine. Virginia Tech. Orlando. San Bernardino. Las Vegas. Sandy Hook. Parkland.

These are only a handful of the places where mass shootings have occurred in the United States in the past 20 years, and these violent crimes are increasing in frequency. An event where four or more individuals are shot now occurs every 12.5 days in this country (Meindl & Ivy, 2017). This rise in mass shootings has recently been linked to “media contagion” theory, which suggests that society’s never-ending news cycle has a “copycat” effect on these crimes (Meindl & Ivy, 2017). It is important to note that the primary media circulating this news are not just television and newspapers anymore, but also social media platforms and online news sources. These new media, including Snapchat, Facebook Live, Twitter, and online blogs, have made the spread of information about mass shootings nearly effortless. It is no coincidence that connections have been made between social media milestones and mass shooting numbers in the United States. This study analyzed social media platforms, online news sources, and mass shooting archives to determine the relationship between two variables: the spread of mass shooting news on social media platforms and the increase in these crimes.

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II. Literature Review

According to Schildkraut and Elsass (2016), a mass shooting can be defined as “an incident of targeted violence carried out by one or more shooters at one or more public or populated locations” (p. 56). A mass shooting incident is also associated with multiple victims and occurs within a 24-hour time frame (Schildkraut & Elsass, 2016). Due to the increase in these acts of violence, researchers have been trying to determine the specific underlying cause. A growing body of research indicates these crimes are “contagious” and related to a heavy amount of traditional news and social media coverage. James Meindl and Jonathan Ivy state that “Contagion models an outcome — when someone engages in a behavior, there is a probability that someone else may do the same” (Meindl & Ivy, 2017, p. 368). Often, “copycat” behavior is influenced by media sources, especially social media. Extensive coverage of mass shootings on these platforms allows potential criminals to identify with a criminal act, leading them to feel they need to fulfill a personal calling (Meindl & Ivy, 2017).

Jennifer Murray identified seven different stages of mass shooting coverage, all of which ultimately contribute to sensationalizing the shooter. Murray demonstrated that shootings such as Virginia Tech and Sandy Hook were inspired by the Columbine shooting in 1999, and shooters Seung-Hui Cho and Adam Lanza, respectively, showed signs of infatuation with Columbine through self-recordings, photos, and notes (Murray, 2017). Murray explained that the way in which today’s mass shootings are portrayed in the news allows, and sometimes tends to support, copycat crimes. “Round-the-clock breaking news is valued more for its entertainment factor,” Murray wrote, “rather than impartial accounting of events and quite often tragedies are sensationalized” (p. 114).

Related research looked at how contagion affects and portrays those with mental illnesses. Using a survey and control groups, Emma McGinty, et al. (2013) showed that media coverage caused the public to have a negative attitude towards those with mental illnesses due to the way that these criminals were depicted (McGinty, Webster, & Webster, 2013). Another study found that mass shooters “may have, consciously or sub-consciously, been inspired to act on previously suppressed urges by exposure to details of similar events,” especially in shootings where four or more people are killed (Towers, Gomez-Lievano, Khan, Mubayi, & Castillo-Chavez, 2015, p. 2).

Researchers have also found that shooters are attracted to media’s ability to easily facilitate fame. The combination of the narcissistic tendencies of these shooters and heightened media coverage seems to have assisted in the increase of these crimes. According to Bushman (2017), “in today’s digital age, one does not have to wait for the FBI or *New York Times* to release the manifesto. One can easily find the manifesto on the Internet, such as on YouTube or Facebook” (p. 8). Lankford found that shooters today receive the equivalent of several million dollars’ worth of earned media coverage for their acts. Data suggests that shooters have even planned their attacks during certain months because they knew there was an opportunity to gain more attention (Lankford, 2018).

Other scholars have examined the culture and impact of social media before, during, and after shooting events. Mazer, Thompson, Cherry, Russell, Payne, Kirby, and Pfohl (2015) found that Twitter was the most-used form of social media after a mass shooting, and that social media users tended to be most active 20 minutes after a shooting, with activity spiking again after the name of the shooter and victims were revealed. Schildkraut and Elsass (2016) found that Twitter activity after two mass shootings caused “digital waves” such as the creation of incident specific hashtags, the establishment of certain trends, and the posting and sharing of millions of tweets. Guggenheim, Jang, Bae, and Neuman (2015) found that Twitter users actually influenced traditional media in terms of what is reported, and that users found Twitter helpful for passing on quick facts and basic information.

The “media contagion” theory is fairly new and has come to relevance within the 21st century. According to previous studies, there is significant evidence to show that the media, traditional and social, have played a significant role in the imitation and “copycat” aspect of these crimes. This study will specifically focus on social media activity and how the evolution of the tool has allowed for the amplification of mass shooting news and the subsequent effect on copycat behavior.

III. Methods

Throughout the data collection phase of this study, it was important to consider two specific factors: how the different media eras have affected the coverage of mass shootings, and how social media have influenced the frequency of these events in the digital age.

To address the first factor, an analysis of media activity and involvement from three historical mass shootings was conducted, specifically focusing on how news was spread among media platforms and how the public used social media as a communication tool during and after the event. The way in which these shootings were portrayed within the media at the time was of particular importance. This study focused on the Columbine, Virginia Tech, and Parkland shootings because these mass shootings took place during three different points in social media's evolution. When the infamous Columbine High School shooting occurred in Littleton, Colorado in April of 1999, social media platforms did not exist, forcing the public to get a majority of their news from newspapers, radio, and television (Hale, 2015). Eight years later, when Seung-Hui Cho shot and killed 32 individuals at Virginia Tech in Blacksburg, VA, popular platforms such as MySpace (2003), Facebook (2004), and Twitter (2006) were in use (Hale, 2015). Social media has continued to advance rapidly since then and when the Parkland, Florida shooting took place at Marjory Stoneman Douglas High School in February 2018, news spread instantaneously on almost all digital platforms including everything from Snapchat and Instagram to Facebook Live and YouTube. With each shooting, it was important to take note of how the media portrayed the incident on digital platforms during this time. By analyzing these mass shootings from three different time periods, media coverage and activity from each can be compared and contrasted, ultimately showing the effects of social media advancement and how social media may have contributed to contagion.

The second factor was then examined through the analysis of a *Mother Jones* mass shooting archive. The dates and the frequency of shootings were examined in particular in order to reveal patterns of contagion. The year of 2011 was used as a "benchmark" for this method due to a Harvard study that showed the rate of mass shootings tripled after this date (Cohen, Azrael, and Miller, 2014). The year was also a landmark for social media, as Twitter doubled its number of users, Facebook reached 750 million users, and Instagram had its one-year anniversary (Lang, 2015). A clear increase in mass shootings after 2011 would suggest that social media may have an impact.

IV. Findings & Discussion

This study found significant patterns between the spread of mass shooting news on social media platforms and the increase in these crimes. The analysis of three different historical mass shootings revealed there to be a difference in coverage due to the media environment in which the shootings occurred. Evidence from an archive then showed that shootings tripled in numbers around the same year that social media use skyrocketed.

Columbine

On April 20, 1999, 13 lives were taken in what many call the most tragic and recognized shooting in history (Mannino, 2012). This mass shooting is known as the Columbine High School Massacre in Littleton, Colorado. Columbine shooters Dylan Klebold and Eric Harris went to their high school that day with the intent to kill, targeting minorities and athletes (Byock, 2009). After analyzing the media coverage that resulted from Columbine, one can recognize the role the specific media era played in terms of how the shooting was publicized in the news. Once again, it is crucial to remember that social media did not exist during this era, and that the closest site resembling a social media platform at this time was Six Degrees, a site used for blogging and instant messaging (Hale, 2015).

The analysis revealed that Columbine's media coverage consisted mainly of newspaper articles, radio broadcasts, and television reports. Due to this lack of immediacy, the public did not receive information as quickly about the shooting, ultimately causing both rumors to spread and individuals to remain unaware of the incident (Shepard, n.d.). Interestingly, media coverage on Columbine hit its peak on the second day after the shooting took place (Schildkraut & Muschert, 2013). This would not be the case today, due to the never-

ending news cycle and rise of popular social media platforms.

Columbine's coverage also revealed one large difference from today's mass shooting coverage, being that the news reports did not include any type of video from the actual shooting besides the school's security footage. Today, it is common to see videos posted on Twitter, Facebook, and Snapchat from the viewpoint of victims involved in the actual shooting. In 1999, students did not have cellphones with cameras capable of taking video. Instead, they mainly used beepers, pagers, and landlines to communicate (Jones, 2009). It is important to note that a majority of the images included in news coverage back then were shots of the scene outside by photographers and news crews (Arenstein, 2018). This difference partially explains why media coverage of Columbine was delayed. Because news reporters and news stations did not have images and videos of the shooting itself, they had to collect accurate information through phone calls and interviews with victims and witnesses (Mannino, 2012).

Media coverage of the Columbine massacre would look different if the shooting had happened in today's digital world. Most likely, the incident would take over the digital space, producing millions of posts, tweets, and shares. The public would be notified on their smartphones instantly and videos from the shooting would be replayed all over television news. After analyzing the media coverage of a mass shooting in 1999, one is able to recognize just how much of a role social media has played in the amplification of news in these crisis situations. For this reason, it is instructive to compare Columbine's media coverage to Virginia Tech's media coverage, the difference being that Virginia Tech occurred eight years later when major social media platforms such as Facebook and Twitter became popular.

Virginia Tech

On April 16, 2007, in Blacksburg, Virginia, 32 people were shot and killed on Virginia Tech's campus. The Virginia Tech shooter, Seung-Hui Cho, was a senior at the time. This shooting took place over the course of two and a half hours, with the first and second half of the shooting separated by Cho's decision to stop and mail a "confession" package to NBC News ("How the Virginia Tech," 2007). After studying the media coverage that resulted from this horrific event, it is clear that the coverage reflects the media era in which the shooting took place. By 2007, social media platforms such as Facebook and Twitter were being used in full force and a majority of the public received news updates from websites, blogs, and other online resources. The digital landscape in 2007 clearly changed since Columbine in 1999, and the coverage of the Virginia Tech shooting, both traditional and social, clearly highlights this difference.

In 2007, Pew Research reported that the Virginia Tech shooting was the single most covered story in the news that year. In the five days following the Virginia Tech shooting, records show that more than half of all news coverage was devoted to updates on the incident ("Biggest Story by Week," 2007). Along with traditional television and radio broadcasts, Facebook and Twitter appeared to be the primary social media platforms used to spread news about the shooting.

Immediately after the attack, Facebook was used by students on digital and mobile devices to notify others that they were safe and alive. This is something that Columbine students were not able to do due to the limitations of the technology at the time. The platform was also used by the public to create certain support groups, such as "Christians Praying for Virginia Tech" and "Canada Supports Virginia Tech" (Pelofsky, 2007). These groups created a lot of attention, each group containing hundreds to thousands of members. On the other hand, Twitter also played a crucial role in the spreading of news about the shooting, with multiple celebrities, bloggers, news stations, and media outlets commenting on the violent attack. For example, WLWT.com tweeted at 1:14 that afternoon, "Waiting for confirmation that at least 30 are dead in Virginia Tech shooting, including the gunman," and soon after, NTV News tweeted, "33 Dead in Virginia Tech shooting. The gunman chained shut the doors of a hall before opening fire. The gunman killed himself." Twitter history shows that hundreds of tweets were coming in every couple of minutes, constantly updating the public on additional details. These social media platforms became vital sources of information not only for the victims involved in the shooting, but also for those all over the world who wanted to know what happened in Blacksburg, Virginia that afternoon.

Media coverage of the Virginia Tech shooting only intensified when information was released concerning the package that Cho had sent to NBC. The network received the package in New York and found it to contain photographs, videos, and an 1,800-word manifesto explaining his malicious behavior. The material shows Cho's anger, frustration, and resentment. In one of the videos, Cho says, "I didn't have to do this. I could have left. I could have fled. But no, I will no longer run. It's not for me. For my children, for my

brothers and sisters that you f---, I did it for them” (Johnson, 2007). Cho's behavior reveals just how desperate he was to become recognized within the public eye. He took time out of his attack to physically send a news station several materials to explain himself. It is assumed that Cho did this with a desire for fame. After NBC posted online some of the materials, the network received public backlash. More than 1,200 comments were posted on NBC's message board in response to Cho's mailed materials in less than 12 hours (Johnson, 2007).

Overall, Cho's actions show recognition of the fact that the media at the time could spread his story. Without Facebook, Twitter, and the other social media platforms, it is certain that news coverage of the shooting would not have reached as many people as quickly. It is interesting to compare the media coverage of Columbine and Virginia Tech because the two incidents received such different reactions due to the eight-year time difference. Clearly, as social media and the digital world developed, news coverage became amplified more easily.

Parkland

The Parkland shooting is the third and last shooting included in this comparative analysis. Nikolas Cruz shot and killed 14 students and three teachers on February 14, 2018 at Marjory Stoneman Douglas High School in Parkland, Florida. Cruz purposely set off the fire alarm in order to draw students and staff outside of their classrooms. All within an hour and a half, the shooting took place, the shooter escaped, and was arrested (Chavez, 2018). The media coverage of this incident was unlike any other, creating millions of posts on social media platforms and highlighting powerful student-run protests and campaigns for weeks on end.

The coverage of the Parkland shooting occurred during the media's most-developed era and attracted attention from political leaders, celebrities, and especially students all over the nation. It is important to recognize that by 2018 it is not uncommon for individuals to solely rely on social media and online news sources for updates on current events. Since Virginia Tech in 2007, popular visual sharing platforms such as Instagram (2010) and Snapchat (2011) had dramatically changed the way in which these incidents are covered.

Parkland media coverage differed in one important way. Instead of honing in on the shooter and his or her motives, the bulk of coverage focused on the students and their plan to end gun violence. One observer recognized, “It has a lot to do with the fact that those kids from that school are super pissed. They've taken a much different activist role than we've seen in previous shootings” (Francis, 2018). The students and survivors of the Parkland shooting quickly realized that social media and online platforms were their best bet in having their voice heard.

The coverage of Parkland through social media started shortly after the shooting began. Content ranging from Snapchat videos to emotional posts for help were released and shared on multiple platforms, including Twitter, Facebook, and Instagram. Students captured the incident on their own phones, including videos of them shielding themselves and areas in the classroom that were damaged from the shots. Students were using Facebook and Twitter specifically to determine if certain friends or family members were still alive, a few posts received thousands of shares from the public. Even during the attack, students still sent tweets. One student stated, “my school is being shot up and I am locked inside” (Shayanian, 2018).

The Parkland coverage on social media did not end there. Marjory Stoneman Douglas High School students called out lawmakers and created a plan for action. The most popular social media platforms became flooded with photos and videos of protesting students, Emma González, David Hogg, Cameron Kasky, and Sarah Chadwick. These students used social media to voice their opinion, call out lawmakers, and spread awareness about gun control. Twitter rapidly verified the accounts of these four students to support their credibility of their information (Wagner, 2018).

Coverage of the shooting progressed with the creation of the #NeverAgain movement and the March For Our Lives demonstration. With this movement and demonstration, students aimed to end gun violence and organized a march in Washington, D.C., on March 24, 2018. All major news organizations reported on the march throughout the day and even celebrities such as Oprah, Miley Cyrus, and Taylor Swift showed their support through social media and monetary donations (Amatulli, 2018).

The extensive media coverage of the Parkland shooting represented a more-developed media era. Much of the coverage surrounding this shooting took place in digital space, with postings on Facebook, Twitter, Snapchat, YouTube, and Instagram. The natural reaction of students to immediately take phones out

and post on social media demonstrated just how much of a role the digital space had in the coverage of this crisis situation in 2018. Unlike the media coverage from Columbine and Virginia Tech, the media coverage of Parkland sparked a global conversation and nationally recognized campaigns. This may be attributed to the social media era and its impact as a communication channel.

Mother Jones Archive

It is evident just how much of an effect the evolution of digital platforms and social media has had on how news of these shootings is disseminated. It is also key to analyze how these findings relate to contagion by looking at the frequency of incidents throughout the media eras. As stated within the methodology, the year of 2011 may be used as a benchmark, due to the surge of social media milestones that year. The mass shooting archive analyzed in this study was provided by Harvard researchers through *Mother Jones* (Cohen, Azrael, & Miller, 2014). The data provides specific information, including an entire record of mass shootings from 1982 to 2018. The archive also provides information on the location of shootings, what year shootings took place, a brief summary of incidents, a count of fatalities and injuries, and other details on weapons used and mental health involvement.

This archive revealed that the number of shootings did in fact increase over time, especially after 2011 (Figure 1). From 2011 to 2018, the numbers noticeably increase and become more consistent. During this time, social media use also became prevalent in society. As Lang (2015) explained, during the year of 2011 Twitter doubled its users, Facebook exceeded 750 million users, and Instagram celebrated its one-year anniversary.

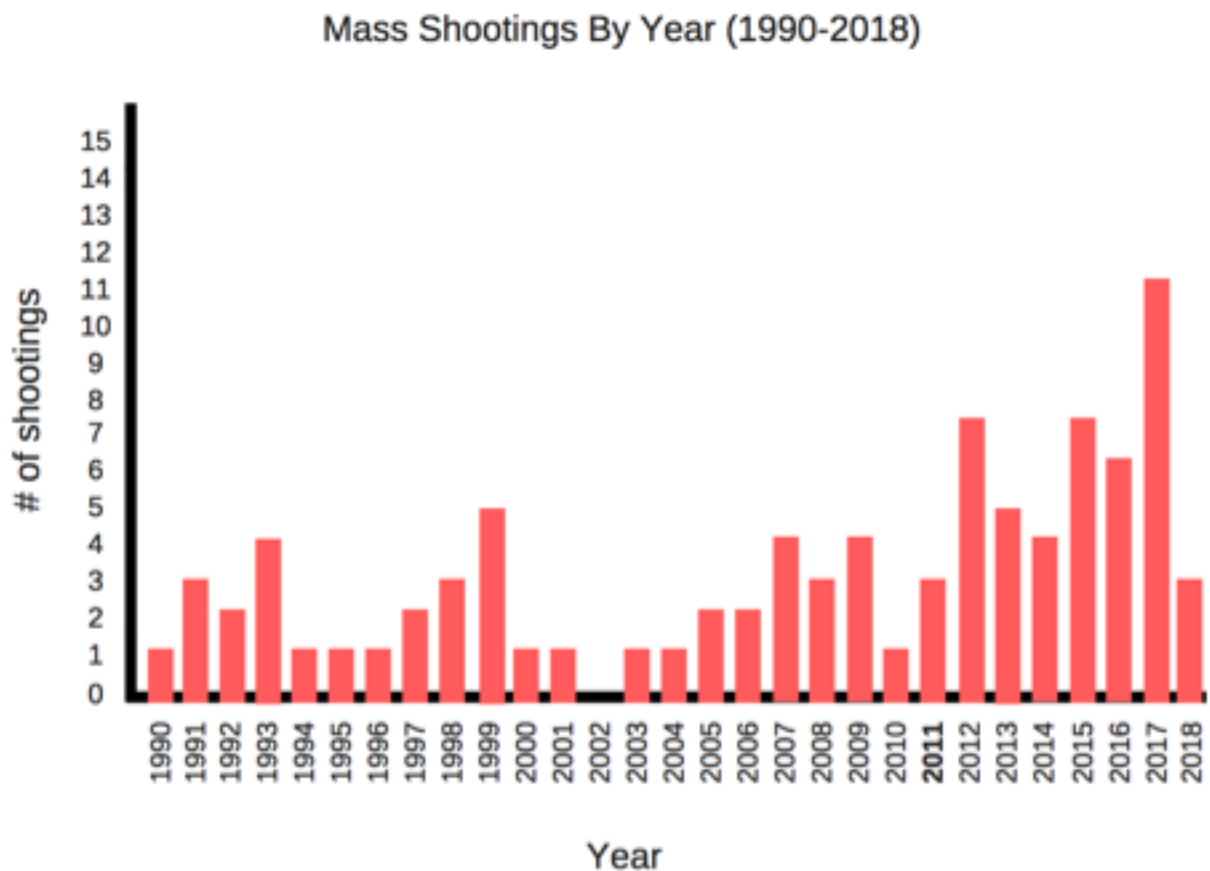


Figure 1. Column graph that represents the number of mass shootings over time (1990-2018). Shows increase in incidents over the years, tripling after 2011. Note: Number of shootings in 2018 is through April.

As seen in *Figure 1*, the average number of annual mass shootings from 2004-2010 was 2.5, compared to 7.5 from 2011-2018. The evidence shows that mass shootings did in fact triple after 2011, suggesting a possible relationship between the spread of mass shooting news on social media platforms and the increase in these crimes.

V. Conclusion

Through analysis of media coverage, both traditional and social, of the shootings at Columbine, Virginia Tech, and Parkland, one can conclude that the media era in which a shooting took place had an enormous effect on how shootings were covered in the news. This study suggests that there is a pattern between the spread of mass shooting news on social media platforms and the increase in these crimes. Over time, as social media has increased in usage, so has the coverage of news concerning mass shootings. This also further reflects shooters' desire for fame and their tendency to copy a crime.

Evidence from this study reveals a large increase in the number of mass shootings after 2011's social media milestones, and one can conclude that social media most likely has some effect on these crimes, although the degree of this relationship is beyond the scope of this study. Other factors, such as treatment of mental illness, or current gun regulations, may well be contributing factors in the rise of mass shootings also. In any case, these findings raise difficult questions about keeping the public informed in a media environment that only seems to encourage these horrific acts.

Future research could focus on protests and campaigns that have been sparked as a result of mass shootings. Students after the Parkland shooting in 2018, for example, blanketed both traditional and social media with hash tags, campaigns, and calls for change, however, how these movements affect future shootings remains to be seen. Or, will they encourage more violent acts?

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