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The valorization of mass shootings online

How users explore, engage with and glorify
mass shootings online

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This report contains references to material the
reader may find distressing.

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↘ Overview

This report provides an overview of the valorization of mass shootings online.

Our research covers the key platforms, demographics and aggregate geographic location of users active in this space, the types of content they seek, and the nature and scale of concerning behaviors that feature.

This report features qualitative and quantitative analysis of Google search and social media data. Social media data analyzed includes national US-relevant spaces on YouTube, 4chan, Reddit and a forum dedicated to the discussion of mass shootings.[1] Analysis of Google search behavior focuses on five US states affected by some of the most deadly and high-profile mass shootings - California, Colorado, Texas, Florida and Washington. Additional qualitative analysis from platforms such as Tumblr, X (formerly known as Twitter) and Minecraft is also included where relevant. An overview of our methodological approach can be found at the end of this report.

Breakdown of social media sample analyzed

	↓ YouTube	↓ 4chan	↓ Forum dedicated to mass shootings discussion	↓ Reddit
Number of spaces analyzed	442 videos	302 threads	471 threads	3 subreddits
Total number of posts collected	4,499 posts	25,937 posts	3,333 posts	1,322 posts
Date range of collection	1 Jan 23 - 30 Jun 23			

Breakdown of search behavior sample analyzed

	↓ California	↓ Texas	↓ Florida	↓ Washington	↓ Colorado
Total number of searches collected	46,323 searches	29,482 searches	19,972 searches	6,277 searches	2,993 searches
Date range of collection	17 April - 1 August 23				

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1.   The name of this forum has been removed from the report to mitigate against the risk of directing at-risk users towards the platform.

↓ Key finding	↓ Insight
Google, YouTube, 4chan, Reddit, and a forum dedicated to the discussion of mass shootings were identified as key platforms containing discussion of mass shootings.	Mass shooting content was identified across **16 platforms**, with the five mentioned being the most significant in terms of the volume and severity of content, as well as the diversity of audience behaviors identified.
YouTube and Reddit host content featuring mass shootings that can facilitate a deeper interest and concerning behaviors.	YouTube was referenced specifically over **2,285** times within Google search data by those searching for mass shooting content - the most-referenced tech platform.
Fringe platforms like 4chan and a forum dedicated to the discussion of mass shootings are spaces that normalize mass shooting violence.	Both platforms featured users exhibiting praise and incitement to violence related to mass shootings.
The glorification of violent mass shootings and engagement with content relating to mass shootings are the prominent behaviors within discussions.	**68%** of at-risk behaviors identified on social media included the glorification of violent mass shootings or engagement with content relating to mass shootings, such as manifestos. These behaviors have been commonly reported among historic perpetrators of mass shootings.
Explicit desire to harm or incite violence was identified in relatively small volumes.	**10%** of at-risk behaviors identified on social media included an explicit desire to harm or incite violence.
Users sought information on a wide range of historic shootings.	User discussion was identified discussing or seeking information about **167** unique mass shootings, which occurred in 11 different countries across an 80-year period.
Perpetrator-produced manifestos prompt some users to glorify violence.	On YouTube and a forum dedicated to the discussion of mass shootings, users discussed perpetrators' manifestos in detail, often prompting the glorification of perpetrators' actions. Text-based posts, PDFs and videos of manifestos were identified across these two platforms.
User-generated content steers conversation and valorizes mass shootings.	Top contributors on a forum dedicated to the discussion of mass shootings steered conversation about mass shootings, while users created images and videos that glorified mass shooters.

↘ Background

> **2 mass shootings** ⬆
> There were almost two mass shootings a day in the US in 2023 - the highest rate on record.[2]

> **4 or more people** 👤
> In this report, mass shootings are defined as shootings where four or more people are wounded or killed, excluding the shooter.[3]

There has been much focus on how to prevent mass shootings. Recommendations from public safety organizations have included improving the protection of public spaces and providing better mental health support to reduce mass gun violence.[4] Significant research has also been conducted into the behaviors, warning signs and "leakages" of past perpetrators - an in-person or online declaration of intent to carry out a mass shooting.[5] Research into a sample of 170 mass public shooters from 1966 to 2019 found that *"nearly half leaked their plans, with 44.3% of them leaking specific plans about a mass shooting".*[6]

Research into the role the internet can play in mass shootings has grown. Such studies have tended to focus on how perpetrators of mass shootings have used social media before their attacks. Recent academic research into the social media habits of 44 mass shooters found that some mass shooters display a fascination with violence, *"even posting about previous mass shooters",* while others *"make public declarations of their intent"* on social media platforms such as YouTube.[7]

Much less attention has been given to the wider online discussion of mass shootings. Existing research focuses on *"fandom"* discussions about different perpetrators and their actions.[8] Within this research, communities were found to identify with, express attraction towards, and deify perpetrators. It has been argued that social media plays a key role in *"fuel[ling] this subculture",* as users within these spaces are able to *"participate in the re-creation and circulation of narratives related to school shootings".*[9] Though the relationship between engagement with the discussion of mass shootings online and the subsequent perpetration of mass shootings is yet to be established in academic literature, some researchers have suggested that *"a clear increase in mass shootings after 2011 would suggest that social media may have had an impact".*[10]

> This report aims to build upon this research to understand how mass shootings are explored, discussed and valorized online. It focuses on highlighting the risks, and what can be done to reduce them. We also recognize that behind such research are hundreds of people affected by mass shootings, all with individual stories of grief, difficulty and resilience. We hope this data can be used in collaboration with partners to reduce the risk of mass shootings in the future.

2.   Based on figures from the Gun Violence Archive.

3.   This definition draws on those used by the Gun Violence Archive and Everytown for Gun Safety. Occasionally, shootings where three individuals were killed have also been included, if they were found to be relevant to discussions of mass shootings online.

4.   Prevention Institute, Gun Violence Must Stop. Here's What We Can Do to Prevent More Deaths; Elaine Vitone, Evidence-based Approaches To Preventing Mass Shootings; Heather Harris, What Do We Need to Learn about Preventing Mass Shootings?.

5.   Peter Langman (2021), *Warning Signs: Identifying School Shooters Before They Strike.*

6.   Jillian Peterson, Gina Erickson and Kyle Knapp (2019), Communication of Intent to Do Harm Preceding Mass Public Shootings in the United States, 1966 to 2019.

7.   Jillian Peterson, James Densley, Jamie Spaulding and Stasia Higgins (2023), How Mass Public Shooters Use Social Media: Exploring Themes and Future Directions.

8.   Oksanen et al. (2014), Glamorising rampage online: School shooting fan communities on YouTube; Jenni Raitanen & Atte Okasen (2018), Global Online Subculture Surrounding School Shootings.

9.   Ibid.

10.   Kristina J. Lee (2018), Mass Shootings and Media Contagion Theory: Social Media's Influence on Frequency of Incidents.
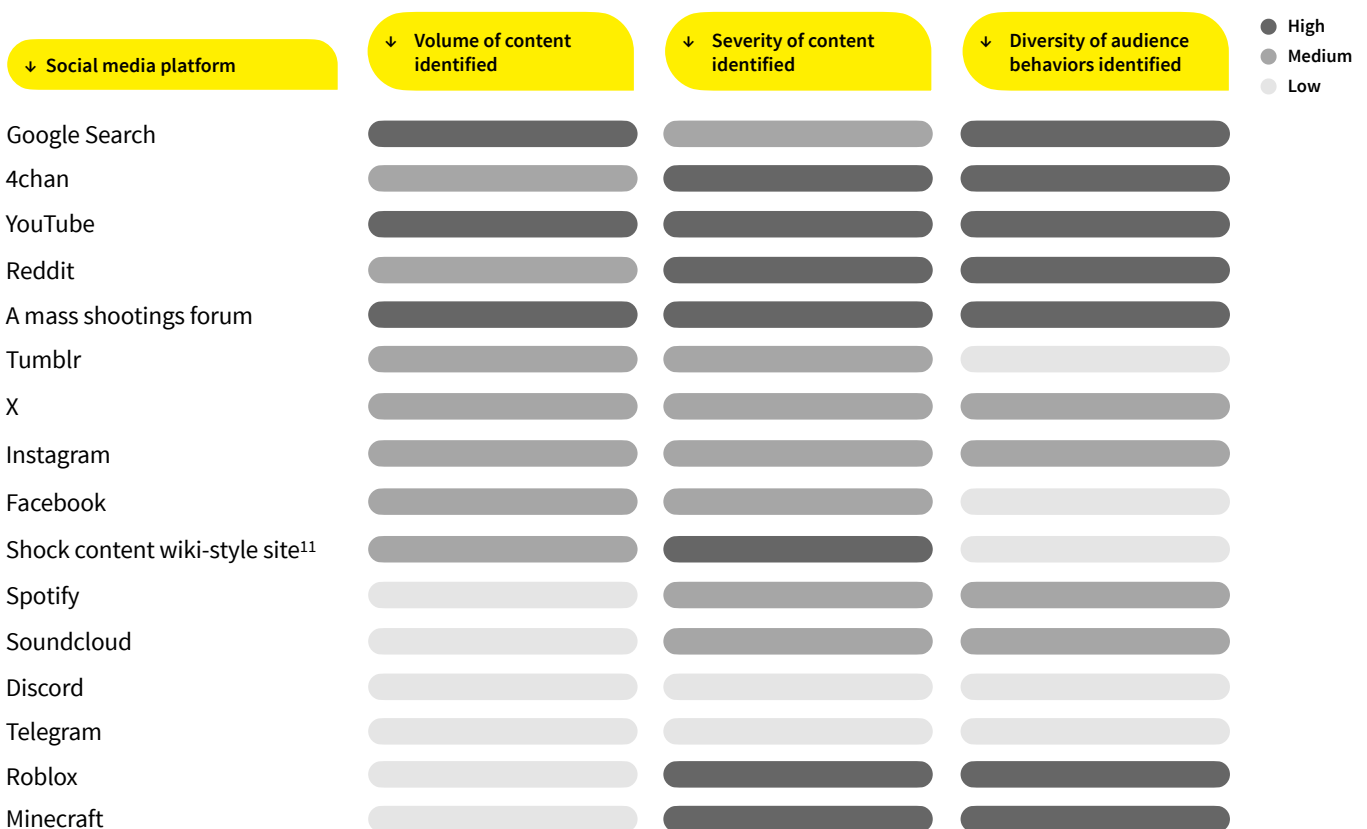
↘ Key platforms

This section provides an overview of the key platforms that feature discussion of mass shootings, and highlights the five key platforms selected for in-depth analysis.

The valorization of mass shootings and their perpetrators features across a wide range of platforms in a variety of forms and to varying degrees. Fifteen social media platforms and one search engine were investigated to explore the volume, severity and diversity of the content and behaviors exhibited.

▼ How the valorization of mass shootings manifests across 16 platforms

The visual below displays the results of our initial analysis of relevant discussions, ranking each platform according to three metrics (volume, severity and diversity of content related to mass shootings identified).

↓ Social media platform	↓ Volume of content identified	↓ Severity of content identified	↓ Diversity of audience behaviors identified
Google Search	High	Medium	High
4chan	Medium	High	High
YouTube	High	High	High
Reddit	Medium	High	High
A mass shootings forum	High	High	High
Tumblr	Medium	Medium	Low
X	Medium	Medium	Medium
Instagram	Medium	Medium	Medium
Facebook	Medium	Medium	Low
Shock content wiki-style site[11]	Medium	High	Low
Spotify	Low	Medium	Medium
Soundcloud	Low	Medium	Medium
Discord	Low	Low	Low
Telegram	Low	Low	Low
Roblox	Low	High	High
Minecraft	Low	High	High

Legend: ● High ● Medium ○ Low

Out of the sixteen platforms investigated as part of the research, **Google Search, YouTube, 4chan,** a **forum dedicated to the discussion of mass shootings** and **Reddit** were selected for in-depth analysis. These five platforms were found to be significant in terms of the volume, severity and diversity of the content and behaviors that featured.

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11.   The name of this site has been removed from the report to mitigate against the risk of directing at-risk users towards the platform.

Ⓖ GOOGLE SEARCH

Google searches tracked as part of this research are broken out into three risk-based categories:

🔍 **_'General interest in mass shootings'_** - Searches that indicate a basic interest in mass shootings, such as the names of mass shootings and their perpetrators. These searches are not necessarily indicative of risk.

🔍 **_'Developed interest'_** - Searches that indicate an increased understanding of, and involvement in, the mass shooting ecosystem. Examples include terms seeking access to forums, content or music related to mass shootings.

🔍 **_'Desire to cause harm'_** - Searches that indicate an intention to commit violence, such as searching for how to kill classmates.

↓ Time frame for data collection	↓ Total searches collected
17 April - 1 August 23	**30,413 searches per month on average across all five states** 'General interest in mass shootings': 25,651 average searches per month (84.3% of total) 'Developed interest': 4,760 average searches per month (15.7%) 'Desire to cause harm': 3 average searches per month (0.01%)

Google Search is a key platform for users to learn more about mass shootings. The significant volume of searches indicating a general interest in mass shootings points to the platform's key role in facilitating user access to information about mass shootings. Though most of these general searches are likely due to harmless curiosity, it is important to note that some general searches could be made by individuals with increased risk towards violence. Perpetrators of mass shootings have also been known to search for such general terms in the lead up to their attacks.[12]

Users also expressed a 'developed interest' in mass shootings on the platform. Search data revealed an interest in video games (**1,079** searches), music (**547**), and clothing (**303**) relating to mass shootings. Others searched for obscure nicknames for perpetrators (**3,346** searches), such as "_Trench Coat Mafia_" and "_Reb and Vodka_" - two terms for the perpetrators of the Columbine High School shooting.

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12. This was confirmed by The Marjory Stoneman Douglas High School Public Safety Commission.

Google Search plays a key role in user migration to platforms that contain spaces dedicated to the discussion of mass shootings. **2,285** relevant searches that contained "YouTube" and **464** searches that contained "Reddit" were identified within the time frame. Searches for a short-lived forum that the perpetrator of the Sandy Hook Elementary School shooting was active on in 2012 were also recorded.
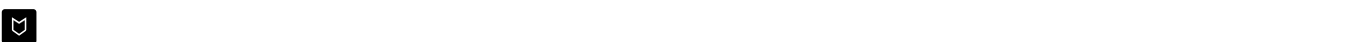
▼ **Average searches per month for each state, per 100,000 people**

This table contains searches that include 'general interest in mass shootings', as well as 'developed interest' and 'desire to cause harm' searches. These results may be driven by a wide range of variables and cannot be taken alone as indicative of risk in the state.

↓ State	↓ Average total searches per month, per 100,000 people	↓ Average 'developed interest' searches per month, per 100,000 people
California	34	5
Texas	28	5
Florida	26	4
Washington	23	1
Colorado	15	2

▶ YOUTUBE

↓ Time frame for data collection	↓ Sample analyzed	↓ Total posts collected
1 Jan 23 - 30 Jun 23	442 videos including footage of events; content produced by perpetrators; discussions of events; and research into perpetrators.	4,499 comments

YouTube plays a key role as the primary video-sharing platform. Relevant videos included in this research were either perpetrator-centered or attack-specific videos. Perpetrator-centered content includes fan edits, compilations of perpetrator-produced videos, analyses of their behavior, interview footage, and readings of perpetrator-generated content. Attack-specific videos typically include attack footage, analyses, news videos, animations, and songs about the event. Individuals will also create public playlists for others. Users were also found to create playlists of videos relating to mass shootings, a behavior that the perpetrator of the Fort Worth mall shooting was found to have engaged in.[13]

> **INSIGHT**
>
> **67% of all 'developed interest' Google searches recorded indicated users were looking for video content related to mass shootings.** 13% named YouTube directly - the most-referenced tech platform within search data.

▼ **Most prominent Google searches seeking access to relevant videos and content on YouTube**

↓ Search terms	↓ Explanation	↓ Total number of searches
Hitmen for Hire video	*'Hitmen for Hire'* is an amateur film made by the Columbine shooters, in which they play members of a 'Trench Coat Mafia' that can be hired to stop bullies. It shows them talking about what they will do with bullies.	2,520

13.   James Hartley (2023), Here's what Texas mall shooter posted on social media, and why it didn't prevent attack.

Pumped up kicks columbine	This search produces numerous videos glorifying mass shootings, typically featuring the song 'Pumped Up Kicks' by Foster The People[14] - a song about school shootings - overlayed on montages of real and film footage from Columbine.	1,933
Randy stair youtube channel	Randy Stair - perpetrator of the 2017 Eaton Township Weis Markets shooting - was a prolific YouTuber. This search generates perpetrator- and fan-made video content on Randy Stair.	1,800
Columbine Hitmen for Hire	See row 1.	1,253
Randy Stair video	See row 3.	598

> **!** **Concerning behavior was identified within mainstream interest in shootings on YouTube.**
> Individuals were identified leaving comments glorifying or justifying attacks, amid a majority of users not displaying an interest in the valorization of mass shootings.

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14.   Nikolas Cruz - perpetrator of the 2018 Marjory Stoneman Douglas High School shooting in Parkland, Florida - watched the music video minutes before committing his attack.

4CHAN

↓ Time frame for data collection	↓ Sample analyzed	↓ Total posts collected
1 Jan 23 - 30 Jun 23	302 threads that referenced "mass shootings" in the title	25,937 posts

The threads analyzed on 4chan were dominated by reactions to shootings that took place within the reporting period, accounting for 93% of the 302 threads identified.

Users most frequently commented on the success of the attacks, perpetrator tactics, and motivations. Several individuals also used the platform to express a desire or interest in causing harm. 4chan is a well known platform for discussions of violence and sharing violent sentiment. Thus, such a high percentage during a period after a mass shooting is not necessarily indicative of increased risk compared to the other platforms, as this behavior tends to be commonplace on 4chan.

Content relating to mass shootings on 4chan is generally more violent and concerning than on other platforms.

4chan is an anonymous image board with low moderation standards. Violent imagery is more normalized on the platform, with more gore content (violent images or footage from the attack) featuring on 4chan than on platforms like Reddit or YouTube. This may be partly due to the nature of 4chan and how common violent sentiment is on the platform. The most commonly identified image was a photo of the deceased Columbine High School shooters.

Users express a desire to carry out violent acts more than on other platforms.

Violent incitement also featured prominently, with users encouraging others to carry out violent attacks or harm themselves. This may be partly due to the nature of the platform, particularly in relation to the encouragement of violence towards oneself, as this tends to feature prominently in user discussions.

> *"To be honest, i would either kill myself or i would try to make my last grand stand against the police until i got nothing left, like the Columbine boys. In the End, I'm death, and if there is a Heaven, i'm 100% sure i am not going there by letting myself get handcuffed"*   `4chan`

A user on 4chan expresses a desire to emulate the Columbine High School shooting perpetrators.

> *"I need a good website to watch shooting videos and that shit on, do any of you retards on ▮▮▮ have one? (I found a site with the Buffalo and Christchurch shooting but nothing else of worth)"*   `4chan`

A user on 4chan requests others share websites displaying footage of mass shootings, alongside a screenshot of the Christchurch shooting.

FORUM DEDICATED TO MASS SHOOTINGS DISCUSSION[15]

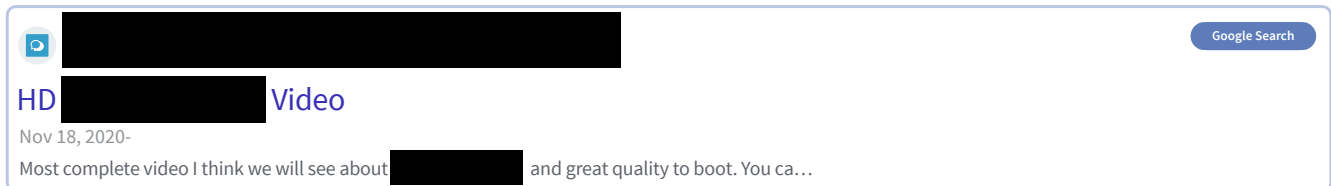| ↓ Time frame for data collection	↓ Sample analyzed	↓ Total posts collected
1 Jan 23 - 30 Jun 23	471 threads posted on the platform within the reporting period	3,333 posts

The forum provides an online space dedicated solely to discussions of mass shootings and their perpetrators.

On this forum, users posted a variety of content including photos of shooters, discussions of attacks, hypothetical scenarios about perpetrators, and characteristics of perpetrators. Users also shared content produced by perpetrators.

The forum hosts niche and hyper-specific content about shootings and perpetrators.

Information about shooters on the forum is extremely accessible, which allows users to learn a lot of information quickly. Google searches for specific and niche mass shooting content return results linking to the forum. The links to the forum include footage of perpetrators before they carried out shootings.

A Google Search result linking to a thread on the forum where a user has provided footage of perpetrators practicing firing guns prior to their attack.

While the majority of conversation revolves around researching perpetrators, discussions of violence are entirely normalized.

Forum users also often ranked shooters based on characteristics like attractiveness, skills as a shooter and the number of people they killed. Three users active on the forum have been found to have committed acts of violence after frequenting the platform. Randy Stair (perpetrator of the Eaton Township Weis Markets shooting) and William Atchison (Aztec High School shooting) are known to have posted on the platform prior to carrying out a mass shooting. Hayden Jagst, another user of the platform, murdered a family member and then intended on carrying out a mass shooting but handed themselves in to the police.[16]

15. The name of this forum has been removed from the report to mitigate against the risk of directing at-risk users towards the platform.
16. Posts from these perpetrators are still accessible on the platform, and users on the forum discuss the perpetrators' activity on the platform in detail.

REDDIT

↓ Time frame for data collection	↓ Sample analyzed	↓ Total posts collected
1 Jan 23 - 30 Jun 23	3 subreddits: One dedicated to the discussion of mass killers, and two dedicated to the discussion of the Columbine High School shooting	1,322 posts

 Reddit serves as a gateway to other platforms, typically where more detailed content can be found.

Posts on Reddit that encourage users to migrate to other platforms, such as YouTube, Discord and the forum dedicated to the discussion of mass shootings, were identified. This tends to happen when users link to other platforms in response to requests for greater detail about perpetrators. For example, one user stated "*to find out more about his* [the perpetrator of the Eaton Township Weis Market shooting] *mental state watch this video*" in response to users discussing the perpetrator's motivations.

Reddit provides a space for discussions of mass shootings and their perpetrators.

Similar to the forum dedicated to the discussion of mass shootings, a series of subreddits (forums grouped by topic) were found to contain broad discussions of mass shootings, information about perpetrators, and discussions about perpetrator-produced content. While individuals conveyed concerning behaviors on Reddit by justifying shooters' actions, the majority of users put in significant effort to distinguish themselves from those who justify, sympathize, or glorify mass shooters.

Despite the majority of users eschewing the endorsement of violence, those historically active in discussions of mass shootings were also found to be active in broader violence-related subreddits.

On Reddit, individuals that posted content on the subreddit dedicated to the discussion of mass killers were found to also post on subreddits that focus on sharing gore content, typically of people dying in extremely violent ways. Users were also found to be posting on subreddits such as TrueCrime and SerialKillers - spaces dedicated to the factual discussion of other forms of violence and crime.

⬎ Examining at-risk behaviors

This section explores the concerning behaviors, identified through this research, of those engaging with and valorizing mass shootings online. This analysis explores the relative prevalence of such behaviors and the nature of the risk identified on the platforms. The behaviors analyzed here were established through a review of existing literature on mass shooting "fandoms" and primary research carried out during the initial phase of the project. Each thematic behavior is explored in this section, from highest to lowest risk, including the extent to which we identified the behavior within the research and with examples of each.

Desire to cause harm

An expression of intent or aspiration to commit an act of violence

↓ **Total searches**

9 (0.1% of non-general searches)

↓ **Total posts**

75 (5% of content in which a discernable behavior was identifiable)

In low volumes, users expressed a desire to carry out acts of violence or to emulate famous mass shooters on 4chan and YouTube. Users expressed a desire to "*pull a Columbine*", "*do a Sandy Hook*" or how they "*often think about shooting up my uni for fun. Il* [sic] *also have a morbid curiosity for columbine and adam lanza*". On Google Search, users searched for terms such as "*how to kill students*" and "*how to kill classmates*", though in very low volumes.

Desire to cause harm was identified most often on 4chan, though the behavior featured across the four key social media platforms as well as Google Search. The popularity of this behavior on 4chan is likely due to the anonymity of users on the platform, as well as the platform's general culture that embraces violent and "edgy" content. It is worth noting that many of these 4chan posts are likely not genuine threats, and involve users trying to provoke a reaction from others.

Incitement to violence

Actively encouraging others to commit an act of violence

↓ **Total posts**[17]

72 (4.8% of content in which a discernable harmful behavior was identified)

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17.   This behavior was not captured in users' Google searches as it is a behavior that requires interaction between two users.

Incitement to violence featured in low volumes on 4chan and YouTube. Posts, comments, and videos where individuals encourage other users to commit an act of violence featured typically in response to users expressing a desire to cause harm. For instance, one individual responded to a comment on a YouTube video related to the Columbine High School perpetrators saying, "*You won't regret anything if you take action You will regret everything if you keep sitting on your @ss whining all day Do it. There is always a way. There are no excuses* [sic]". This behavior also appeared in standalone settings or in response to people expressing personal grievances. No Google Search terms were tracked for this behavior as it is a behavior that requires interaction between two users.

> *"Go for the high score, OP"*

A 4chan user encourages another user to kill as many people as possible to obtain a "high score".

Glorification of violence

The glorification or praise of perpetrators' violence

↓ Total searches	↓ Total posts
1,933 (12% of 'developed interest' searches)	**506** (34% of content in which a discernable behavior was identifiable)

The glorification of perpetrators' violence was a key online behavior among the harmful behaviors identified. This featured often in users' discussions of mass shooter tactics, "*high scores*" (the number of people a perpetrator killed), target selection, and within users attempts to locate footage of mass shootings. For example, one anonymous user on 4chan discussing the perpetrator of the Sandy Hook Elementary School shooting stated, "*there's something to be said for the power of holding the elementary school high score, and, like all my favourite mass shooters, he killed himself before the cops could get to him*". Users referenced "*high scores*" 29 times across platforms, often expressing their preference for a shooter based on their "*score*". Interest in the number of people killed by a perpetrator was also expressed on platforms such as a shock content wiki-style site, where a page hosts a table of mass shooters it refers to as "*the VIP club of the 21st century gold standard of murder*".

> *"They couldn't even keep the high score for that long. Smh* [shaking my head, i.e. disappointment]*"*
>
> *"Commander Cho is more skilled, complex and deep than Eric and Dylan will ever be."*

A user on the forum dedicated to the discussion of mass shootings expresses their support for the perpetrator of the Virginia Tech shooting, Seung-Hui Cho, for the tactics he employed.

References to the perpetrators as "heroes" or "saints" were identified 46 times across social media platforms. These references were typically linked to discussions of perpetrators' tactics and "*high scores*". The perpetrator of the Virginia Tech shooting - Seung-Hui Cho - was also occasionally referred to as "*Commander*" or "*General Cho*" within discussions (15 references identified).

Users searched for content glorifying perpetrators on Google Search. The search term "*Pumped Up Kicks Columbine*" (**1,933** searches) resulted in links to videos across TikTok and Facebook that glorified the perpetrators of the Columbine High School shooting, overlaid with the song Pumped Up Kicks by Foster the People.[18]

Three videos memorializing the perpetrators of mass shootings received over 66,000 views. These videos are compilations of images of perpetrators accompanied by text calling for them to "*rest in peace*". Videos of this nature often prompted responses such as "*he was a hero to us, we miss him so - may general lanza* (Sandy Hook Elementary School shooting perpetrator) *rest in peace*" and "*God bless the two heroes. Martyrs* (in reference to the perpetrators of the Columbine High School shooting)".

Users also identified themselves with perpetrators across social media. For example, on a video about Columbine High School perpetrator Dylan Klebold, one individual commented "*i really see myself in him i relate to him so much in so many ways. it makes me wonder if we were together if we'd make each other better or worse*".

Are there songs that remind you of Dylan Klebold or Eric Harris?

For example, when listening to the band Nine Inch Nails or KMFDM, it's impossible for me not to think about them.

Also, when I listen to random songs, it will remind me of one of them depending on the song's mood.

I was listening to "Clocks" by Coldplay, and when he sang the lyrics "You are" (you would have to listen to understand), Dylan Klebold and his journal came to mind.

I know I can't be the only one to experience this.

I believe once you find out about the Columbine High School massacre and go deep into research, it's impossible to escape.

⬆ 90 ⬇   💬 127   ⬆ Share

A user discusses songs that remind them of the perpetrators of the Columbine High School shooting

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18. The song features lyrics that describe the homicidal thoughts of a troubled youth named Robert, who is plotting to carry out a school shooting. Nikolas Cruz - perpetrator of the 2018 Marjory Stoneman Douglas High School shooting in Parkland, Florida - watched the music video minutes before committing his attack.

Attraction

An expression of romantic or sexual attraction to a perpetrator.

↓ **Total posts**[19]

205 (14% of content in which a discernable behavior was identifiable)

Expressions of attraction included declarations of love, fanfiction and drawings of perpetrators with hearts. This tended to be directed toward the perpetrators of the Columbine High School shooting and the Virginia Tech shooting on YouTube, Reddit and the forum dedicated to the discussion of mass shootings. For example, one Reddit user declared their interest in Virginia Tech Massacre shooter Seung Hui Cho, stating, "*I've been crushing on him since 2007. I've collected a ton of info about him including vids and pics. Also, written about him and had pics of him commissioned*." Users occasionally downplayed the perpetrators' violent acts alongside their expression of attraction. Google Search activity related to this behavior was not identified during the reporting period.

Tumblr was found to host a particularly large community of users expressing their attraction to perpetrators. Analysis of references to the perpetrators of the Columbine High School shooting found more than 500 posts expressing attraction towards the two shooters within the reporting period.

> *"He's a cutie pie. And a smartie.*
> *Ok, ok he killed people. What do I care?! I have the constitutional right to fall in love with as many school shooters as I want!!"*
> *"I'm Smiggles' BIGGEST STAN!!!"*

A user expresses their attraction toward the perpetrator of the Sandy Hook Elementary School shooting.

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19.   This behavior was not identified within Google search data, likely due to the purpose of a search engine i.e., to find information, rather than express feelings of attraction.

Engagement

Users seeking more content relating to mass shooters, such as videos, forums, manifestos and other written content.

↓ Total searches

9,299 (57% of 'developed interest' searches)

↓ Total posts

503 (34% of content in which a discernable behavior was identifiable)

Google Searches indicating engagement accounted for 57% of all 'developed interest' searches. These included **8,895** searches for videos, **166** searches for manifestos and **67** searches for other written content, such as the journal of Randy Stair. Searches indicating an engagement with forums also featured, with **498** searches for content hosted on forums. This included searches such as "Randy Stair Reddit" (45 searches) and "Vladislav Roslyakov Reddit" (26 searches).

Passive engagement also featured across all social media platforms analyzed. Passive engagement is defined as users who might watch a video or read a forum post about mass shootings but who otherwise do not engage. It is not possible to quantify the volume of passive engagers across these platforms. However, it is possible to gain a sense of passive engagement on YouTube. For example, one YouTube channel that produces content related to mass shootings received an average of **865** views a day.[20] The channel received **310** comments during the reporting period, indicating that there is a significantly larger audience engaging with the channel's content passively. It is likely that this dynamic is replicated across YouTube and other social media platforms.

Behaviors linked to real world violence

As outlined above, the key behaviors found within the engagement and valorization of mass shootings can indicate varying levels of risk. In order to articulate the link between such behaviors and real-world violence, the table below outlines the extent to which historic perpetrators of mass violence have exhibited such behaviors online.

Evidence of historic perpetrators' behaviors on social media was collected through a review of existing literature on perpetrators. While not all instances of these behaviors will result in offline violence, the presence of such behavior from past perpetrators necessitates a cause for concern. The historic perpetrators of mass violence that have been analyzed for concerning behaviors have been selected because they displayed no evidence of clear violent extremist ideologies in their actions.

The majority of historic perpetrators of mass violence expressed a desire to cause harm on social media. This behavior, otherwise known as leakages, is often suggested as the focal point for interventions and law enforcement seeking to prevent mass shootings.[21] However, the majority of these instances of leakages take place in closed groups or in private messages that are inaccessible. Therefore, the presence of public additional behaviors presents itself as a potential indicator that interventions should seek to target.

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20.   Analysis of this YouTube channel on 30 June 2021 found that it had a total of 1,189,015 views. On 30 June 2023 the channel had 1,820,800. This means the channel averaged 865 views a day over a two-year period.

21.   Jillian Peterson, Gina Erickson and Kyle Knapp (2021), Communication of Intent to Do Harm Preceding Mass Public Shootings in the United States, 1966 to 2019.

Reported online at-risk behaviors linked to past shootings

↓ Event name	↓ Date	↓ Perpetrator	↓ Behaviors reported
Robb Elementary School shooting	05/24/2022	Salvador Ramos	Engagement, Glorification of violence, Desire to cause harm
Covenant School shooting	03/27/2023	Audrey Hale	Desire to cause harm
Highland Park shooting	07/04/2022	Robert E. Crimo III	Glorification of violence, Desire to cause harm, Incitement to violence
Sandy Hook Elementary School shooting	12/14/2012	Adam Lanza	Engagement, Glorification of violence, Identification
Dawson College shooting	09/13/2006	Kimveer Gill	Desire to cause harm, Identification
Dayton shooting	08/04/2019	Connor Betts	Desire to cause harm, Glorification of violence
Oxford High School shooting	11/30/2021	Ethan Crumbley	Desire to cause harm
Marjory Stoneman Douglas High School Shooting	02/14/2018	Nikolas Cruz	Engagement, Glorification of violence
Columbine High School shooting	04/20/1999	Eric Harris	Desire to cause harm
Thousand Oaks shooting	11/07/2018	Ian David Long	Glorification of violence
Old National Bank shooting	04/10/2023	Connor Sturgeon	Glorification of violence
Santa Fe High School Shooting	05/18/2018	Dimitrios Pagourtzis	Glorification of violence
Eaton Township Weis Markets shooting	06/08/2017	Randy Stair	Desire to cause harm, Glorification of violence

Red Lake High School shooting	03/21/2005	Jeffrey Weise	Glorification of violence
Aztec High School shooting	07/12/2017	William Atchinson	Glorification of violence, Desire to cause harm, Identification

↘ Notable events

This section explores how notable events feature across the valorization of mass shootings. These include shootings that occurred during the reporting period, as well as those with an explicit ideological motivation. Given that the discussion of mass shootings is the focal point, establishing specific patterns of interest is central to a detailed understanding of how mass shootings are valorized online.

Historic mass shootings of significant interest

The Columbine High School shooting generated the most interest across the exploration and discussion of mass shootings online. There were over **31,266** searches relating to the attack recorded on Google during the reporting period, and over **794** posts explicitly referencing the attack within spaces dedicated to discussing mass shootings across YouTube, 4chan and the forum dedicated to the discussion of mass shootings[22] - more than any other shooting across all monitored platforms. There were also **4,491** mentions of Columbine identified across the whole of Reddit.

Discussions of Columbine included users seeking specific details related to the attack and the perpetrators, Eric Harris and Dylan Klebold. These included **2,520** searches for "Hitmen for Hire video" and **1,253** searches for "Columbine Hitmen for Hire".[23] Some individuals memorialized the perpetrators on YouTube by naming them as heroes or discussing them in a favorable light. There were also almost **300** searches indicating a desire to buy the same t-shirt worn by perpetrator Eric Harris. Unlike on the other platforms, 4chan users most frequently discussed Columbine High School conspiracy theories and mocked those who glorify or are attracted to the perpetrators.

Users also sought out information relating to other mass shootings in significant volumes, indicating the breadth of interest. Analysis of references to mass shootings across Reddit as a whole flagged that Buffalo (**10,687** posts), Robb Elementary (**2,629**), and Stoneman Douglas (**2,151**) all featured prominently on the platform. On Google Search, there was a significant amount of interest in the Eaton Township Weis Markets shooting (**15,798** searches), the Thurston High School shooting (**10,045**), the Lake Worth Middle School shooting (**6,872**) and the University of Alabama shooting (**6,851**). Notably, with the exception of Columbine and Sandy Hook, interest in mass shootings tended to be entirely driven by searches for the perpetrators rather than for the event itself.

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22. The number of posts include those that directly mention a shooting. Relevant discussion was often found in the surrounding posts, but does not feature in the quantitative breakdowns because they did not mention shootings by name.
23. 'Hitmen for Hire' is an amateur film made by the Columbine shooters where they play members of a 'Trench Coat Mafia' that can be hired to stop bullies. It shows them talking about what they will do with bullies.

Shootings that occurred during the reporting period

4chan was a key space on which to discuss shootings that have just occurred. There were significant spikes in discussions of mass shootings on 4chan related to four shootings that took place during the reporting period: Monterey Park, Michigan State University, Nashville School and Allen, Texas.

▼ **Discussions intersected with other violent extremist sentiment on 4chan**

MONTEREY PARK

21 January 2023

Focused on 72 year old perpetrator Huu Can Tran's ethnicity and age. Others shared false information regarding the shooting, alleging that it was perpetrated by a black male as an act of anti-Asian violence.

MICHIGAN STATE UNIVERSITY

13 February 2023

Also focused on perpetrator Anthony Dwayne McRae's ethnicity. Users expressed hostility towards the perpetrator for his perceived "black on white violence" and engaged in broader anti-Black discussions.
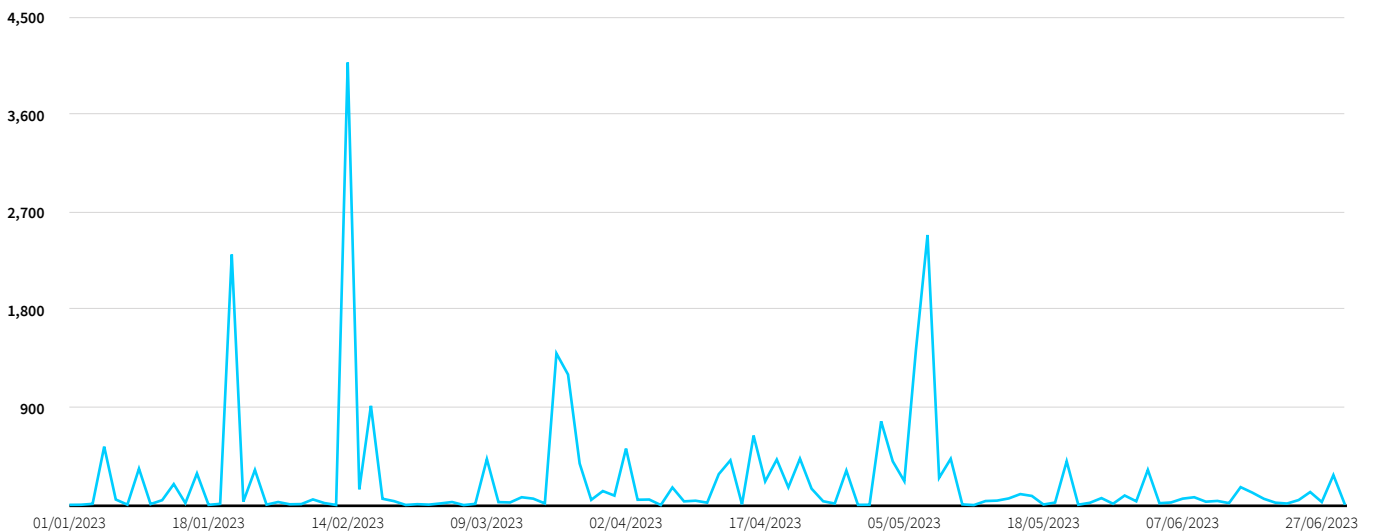
NASHVILLE SCHOOL

27 March 2023

Focused on the perpetrator's identity as a transgender man. Users expressed significant volumes of anti-LGBTQ sentiment and expressed violent sentiment towards Hale for their targeting of children aged 9.

ALLEN, TEXAS

6 May 2023

Focused on attempts to locate footage of the shooting, discussions of the perpetrators Latino heritage and ethnic demographics in Texas.

Analysis of YouTube and the forum dedicated to the discussion of mass shootings found that mass shootings that had just occurred were not a driver of discussion on these platforms, with no notable increase observed following each shooting.

The overlap between mass shootings and domestic violent extremism

Users discussed both ideologically-motivated and non-ideologically motivated mass shooters. Other forms of extremism and harm online - such as racially or ethnically motivated violent extremism and harmful conspiracy theories - were also identified. **Users on Reddit were found to be active in both mass shooting forums as well as other violence-related subreddits.** Harmful conspiracy theories alleging that mass shootings were "faked" by the US government featured prominently on 4chan in relation to the Sandy Hook Elementary School shooting and the Robb Elementary School shooting. Antisemitic conspiracy theories, racism, and other violent extremist narratives were identified within discussions of the Buffalo shooting on 4chan and the forum dedicated to the discussion of mass shootings.
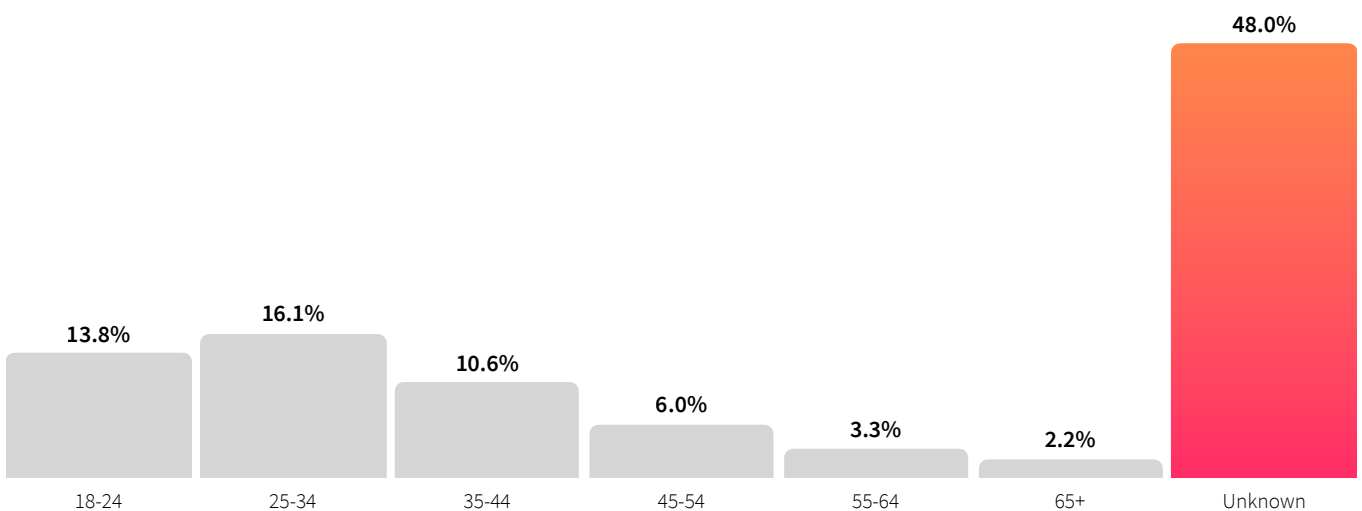
Users valorized the *act* of a shooting itself within discussions of ideologically-motivated and non-ideologically motivated mass shooters. Across all four key social media platforms, ideologically-motivated shooters were included in user rankings of mass shooters in terms of attractiveness, ethnicity, or 'kill score', and elicited behaviors associated with valorizing mass shootings. For example, many users discussing the Buffalo shooting searched for a livestream of the attack; justified the shooter based on their beliefs; debated the worthiness of their grievances; and incited violence in response to the attack. While some of these behaviors are not exclusive to the valorization of mass shootings, they demonstrate how behavior glorifying violence can overlap and co-exist with and within other forms of extremism and harm online.
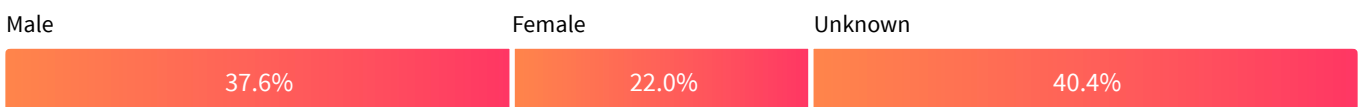
↘ Audience characteristics

Moonshot analyzed the demographic information of users searching for content related to mass shootings and shooters. The audience includes 'general interest in mass shootings', 'developed interest' and 'desire to cause harm' searches. All Google Search data insights are anonymized and aggregated by Google's API.

Where demographics could be identified, those searching for mass shootings online were primarily young men

▼ **Age breakdown**

18-24	25-34	35-44	45-54	55-64	65+	Unknown
13.8%	16.1%	10.6%	6.0%	3.3%	2.2%	48.0%

▼ **Gender breakdown**

Male	Female	Unknown
37.6%	22.0%	40.4%

Past research into the discussion of mass shootings online has reflected a similar demographic breakdown

Our demographic analysis uses available data from Google's data collection, which includes users aged 18 or above. Establishing a comparable benchmark for the demographic data is complex, as there is very little existing data and few ways to reliably access social media demographic data for such audiences. However, past research carried out by Moonshot into this ecosystem on YouTube found a similar demographic trend towards males aged between 18 and 34. Additionally, research from 2020 involved interviews with 22 individuals that were deeply interested in school shootings - who were an average age of 20 years old. In terms of gender, four interviewees defined themselves as male, 15 as female, one as gender-queer, one as female-to-male transsexual, and one as gender fluid.[24]

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24.   Jenni Raitanen & Atte Okasen (2019), Deep interest in school shootings and online radicalization

↘ Content generation

This section of the report explores the types of content identified within discussions of mass shootings online. Our research identified two types of content generators: perpetrators and users.

Perpetrator-generated content

Content produced by perpetrators featured heavily in audience discussions of mass shootings. Historically, perpetrators have used the internet and social media to spread their ideas and announce their intent to carry out attacks.[25] Our analysis found that users are particularly interested in locating and distributing content produced by perpetrators.

Perpetrator-generated manifestos prompted some users to glorify perpetrators' actions. Manifestos – which detail the perpetrator's intention prior to their attack – can be created in written or video form. They appeared on several platforms like Reddit, 4chan, the forum dedicated to the discussion of mass shootings, YouTube, X, and Tumblr as text based posts, PDFs and videos. Reactions to this content varied from expressing a general interest in mass shootings to more concerning behaviors, like justifying the perpetrator's actions or glorifying the attack.

> *"Wasted potential, Juraj was a good writer and intelligent.*
> *He was only limited by the weapons he had available."*   ●

A user discussing the manifesto released by the perpetrator of 2022 Bratislava Shooting laments that only two people were killed.

⬒ _____

Users also engaged with violent videos produced by perpetrators that do not explicitly link to their mass shooting. The contents of these videos varied significantly by perpetrator. These included animations produced by the Red Lake High School shooting perpetrator Jeffrey Weise and a music video produced by the Highland Park perpetrator Robert E. Crimo III that depicts a mass murder. Individuals interacting with these videos typically conveyed a general interest in, identification with, or attraction toward, the shooter.

An animated cartoon of a shooting produced by Jeffrey Weise.

_____

25.   Raitanen J. and Okasen A. (2018), Global Online Subculture Surrounding School Shootings.

Perpetrator-generated video games and broader writings also featured. Eric Harris designed a modification for the game Doom[26] that was widely referenced in audience discussions of mass shootings. This research identified almost **1,000** Google searches for this modified game. Discussions of Harris' Doom level frequently appeared on Reddit, 4chan, X, the forum dedicated to the discussion of mass shootings, and YouTube. Journal entries, plays, poems, short stories, songs and letters generated by perpetrators also appeared on Reddit, 4chan, the forum dedicated to the discussion of mass shootings, YouTube, X, Spotify and Tumblr. Users interacting with this type of content typically conveyed a general interest in the perpetrator, a desire to identify with the perpetrator, or an attraction to the perpetrator.

User-generated content

User-generated content also featured within discussions of mass shootings. This primarily took the form of users starting and steering conversations on the topic, or creating visual content valorizing mass shootings.

The top ten contributors on the forum dedicated to the discussion of mass shootings facilitated the discussion and valorization of mass shootings. These accounts produced a wide variety of content, which primarily included discussions of specific details about the attacks, photos relating to the attacks, and specific facts or questions about the shooters. Our research identified that the most popular content from these accounts posted breaking news of the latest mass shootings, demonstrating a high-level of user interest in recent attacks. Additionally, eight out of the top ten contributors were also the most active topic starters. This indicates that some users actively steered conversations about mass shootings on the forum.

Visual content produced by users. This content typically took the form of videos and images, with users creating visual content that displays either attraction towards, or glorification of, perpetrators. The majority of this content was identified on YouTube, Reddit and the forum dedicated to the discussion of mass shootings, however, X, TikTok and Tumblr contain significant volumes of content that displays attraction to perpetrators. While it is not possible to quantify volumes of this content on X, TikTok and Tumblr, it appears that Tumblr accounts for significantly more than other platforms.

A user-generated image glorifying the perpetrators of the Columbine High School shooting

26.   Doom is a first-person shooter video game that allows user-generated modifications through the creation of a WAD file. By downloading the WAD file produced by Harris, users can play Harris' level.

⬊ User journeys & experiences

This section details some of the ways in which users with an interest in mass shootings can be exposed to more concerning content. The examples here were identified as part of the qualitative research carried out, and reflect some of the ways a user may become more engaged in spaces which feature discussion and valorization of mass shootings.

Ⓖ GOOGLE

Google searches indicating a 'general interest in mass shootings' lead to results from more concerning platforms.

A search for the perpetrator of the Jokela School shooting (searched **3,021** times) resulted in search results for platforms such as a shock content wiki-style site that hosts racist and violent content. This site hosts significant volumes of graphic content, and features the glorification and incitement of mass shootings.
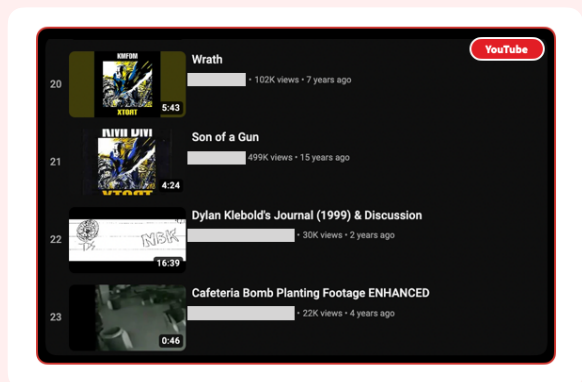

A Google Search results page containing links to an entry from a wiki-style platform that hosts racist and violent content for the perpetrator of the Jokela School shooting

▶ YOUTUBE

YouTube recommendations and playlists can expose users to those identifying with and justifying mass shooters.

A search on YouTube for terms relating to Columbine (such as "Reb and Vodka", nicknames for the two perpetrators) can result in users accessing playlists such as "Red&Vodka" (**8,937** views). The comments sections of these videos include users sympathizing and identifying with shooters, as well as justifying attacks.
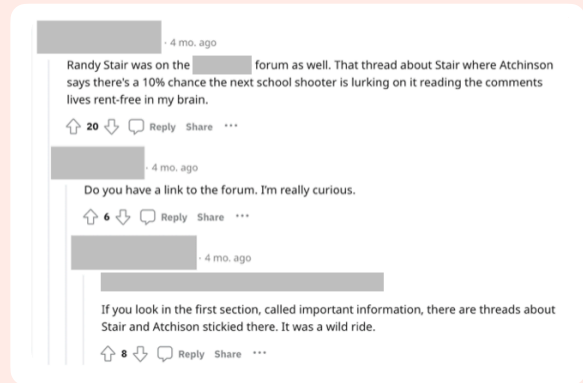

A YouTube playlist containing footage of the Columbine High School shooting as well as details of one of the perpetrators journal

REDDIT

Users researching mass shootings on mainstream platforms like Reddit can be encouraged to migrate to niche sites by others.

For example, users who were curious about perpetrators' social media usage were observed being directed by others to the forum dedicated to the discussion of mass shootings. The normalization of violence on such sites was found to be prevalent.
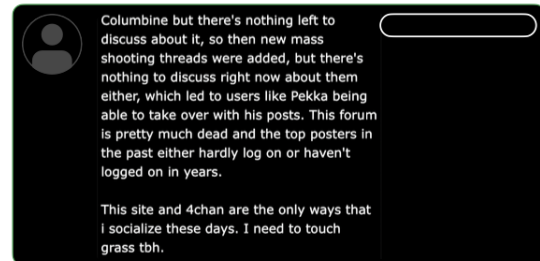

· 4 mo. ago

Randy Stair was on the ▮▮▮▮▮▮ forum as well. That thread about Stair where Atchinson says there's a 10% chance the next school shooter is lurking on it reading the comments lives rent-free in my brain.

⬆ **20** ⬇ 💬 Reply Share ···

· 4 mo. ago

Do you have a link to the forum. I'm really curious.

⬆ **6** ⬇ 💬 Reply Share ···

· 4 mo. ago

If you look in the first section, called important information, there are threads about Stair and Atchison stickied there. It was a wild ride.

⬆ **8** ⬇ 💬 Reply Share ···

A Reddit user encourages other users to migrate to the forum dedicated to the discussion of mass shootings.

4CHAN

Engagement with users that normalize violence and glorify mass shooters.

On 4chan and the forum dedicated to the discussion of mass shootings, those engaging with discussions about mass shootings were exposed to users encouraging violence towards others and suicide. Some users also expressed a reliance on such spaces for a sense of community.

Columbine but there's nothing left to discuss about it, so then new mass shooting threads were added, but there's nothing to discuss right now about them either, which led to users like Pekka being able to take over with his posts. This forum is pretty much dead and the top posters in the past either hardly log on or haven't logged on in years.

This site and 4chan are the only ways that i socialize these days. I need to touch grass tbh.

User discusses their reliance on 4chan and the forum dedicated to the discussion of mass shootings for social interaction.

Appendix A - Methodology

Phase I: Indicators of the valorization of mass shootings

First, Moonshot enhanced its **database of 32,500 search and social media indicators**: text-based terms and phrases that may indicate an interest in, or valorization of, mass shootings. It includes 500 terms relating to shootings and shooters, as well as covering associated websites, forums, usernames, music, slogans, jargon and behaviors. This database empowers analysis, and is used to identify relevant spaces, discussion and behavior related to mass shootings.

The database was built using Moonshot's internal subject-matter expertise developed during past research into how users explore, engage with and valorize mass shootings online, and was supplemented with substantial desk research. This included a review of available court documents from past mass shooting trials, and the known internet history of past perpetrators. Furthermore, open source intelligence was conducted using a snowball methodology, as well as literature reviews of existing research in the field. Sources were cross-verified where possible in order to maximize accuracy.

Phase II: Viability assessment

Moonshot then conducted an initial viability assessment to identify the platforms of highest relevance to the mass shooting ecosystem.

As part of this phase, we assessed: **Google, 4chan, YouTube, Reddit, Tumblr, X, Instagram, Facebook, Spotify, Soundcloud, Discord, Telegram, Roblox** and **Minecraft**, as well as a **forum dedicated to the discussion of mass shootings** and a **shock content wiki-style site that hosts racist and violent content.**

Each platform was assessed according to volume and severity of relevant content, as well as diversity of audience behaviors identified. As a result of this viability assessment, **Google, YouTube, 4chan, Reddit** and **the forum dedicated to the discussion of mass shootings** were selected as platforms for in-depth analysis.

Phase III: Identification of key spaces

Relevant spaces were identified on each of the aforementioned platforms, selected as a focal point for analysis due to the presence of content relevant to the mass shooting ecosystem. The spaces selected for in-depth analysis on each of the platforms were:

‣ **Google Search:** Over 30,000 unique search terms, covering the names of shootings and shooters, as well as associated websites, forums, usernames, music, slogans, jargon and behaviors.

‣ **YouTube:** The comments section of 442 videos related to the mass shooting ecosystem. The videos cover a wide range of mass shooting content, including but not limited to: content produced by perpetrators of mass shootings; videos of perpetrators prior to their attacks; videos that are sympathetic toward perpetrators; detailed walkthroughs of mass shootings; and videos of users playing video games re-enacting mass shootings.

‣ **4chan:** 302 threads that either included the phrase "mass shooting" or a reference to a mass shooting that took place within the reporting period in the title thread.

‣ **Reddit:** Three subreddits that feature mass shooting content: one dedicated to the discussion of mass killers, and two dedicated to the discussion of the Columbine High School shooting.

‣ **Forum dedicated to the discussion of mass shootings:** 471 threads on the public sections of the eight subforums of the website. This included three forums dedicated to discussing the Columbine High School shooting; one forum dedicated to discussing the Sandy Hook Elementary School shooting; one forum dedicated to discussing the Marjory Stoneman Douglas High School shooting; and two forums dedicated to discussing "Other Mass shootings" and "All other crimes".

Phase IV: Data collection

Moonshot's proprietary data collection and analysis system provides our analysts with a single interface, which they can use to configure and manage the collection of data. We are able to identify large volumes of potentially harmful content quickly and efficiently.

For Google Search, Moonshot set up its Search Insights Tool, an internal search tracking technology capable of gathering search data. Leveraging the database of indicators, the search tracking tool collects Google's commercially-available data to access user search behavior. This custom search tracking tool provides a granular view of search behavior segmented by locality, enabling the discovery of specific trends unique to local populations. The Search Insights Tool is compliant with US Constitutional protections and U.S. data privacy legislation, as it collects aggregated search data and does not collect any personally identifiable information on the individuals behind the searches such as IP addresses. The tool collected data over a period of 15 weeks, from 17 April 2023 to 1 August 2023, as agreed with Everytown for Gun Safety. Throughout this period, data collected was closely monitored, to remove false positives and maintain data accuracy. Where relevant, additional search indicators were added during collection to maximize its coverage of the ecosystem.

For social media platforms, Moonshot collected public data at scale from the mass shooter ecosystem and deployed an automated piece of proprietary technology to categorize it and identify harmful content. This system allows us to automate the identification of relevant sentiment and behaviors, leveraging the database of indicators to surface and risk-assess relevant content. As part of our data quality assurance process, a sample of this dataset is scrutinized and assessed to ensure accuracy and consistency of our analysis. For all social media platforms, the data collection period was between 1 January 2023 and 30 June 2023.
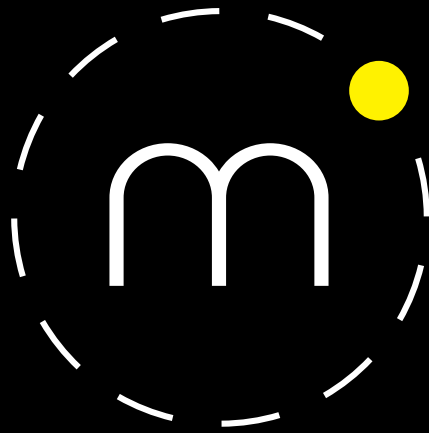
Phase V: Quality assurance

In order to guarantee reliability and precision in our analysis and reporting, we implement a comprehensive Quality Assurance (QA) process. This process encompasses all facets of our research. By adopting this QA process, we apply the principles of objectivity, non-partisanship, and a strictly non-political approach. Through evaluation and scrutiny, we are able to maintain the validity of our analyses, ensuring accurate and consistent analysis, and providing a solid foundation for reliable insights and informed decision-making.

⬊ Appendix B: Limitations

Search data limited to Google only	Our search analysis gathered data from Google search, but not other search engines. As such, there is a reasonable possibility that interest in the mass shooting ecosystem occurs on other search platforms not covered by this analysis.
Text-based quantitative analysis based on the database of indicators does not capture posts without specific keywords.	For example, mentions of the Columbine High School massacre does not include posts discussing the shooting that do not include specific keywords like the name of the school or perpetrators. However, such posts are captured within qualitative analysis of these spaces.
The extent and effect of passive engagement cannot be fully assessed.	Our analysis focuses on how users seek, engage with, and discuss content related to mass shootings. The effect of passive engagement - e.g., users who watch a video or read a forum post about mass shootings but otherwise do not engage - cannot be assessed in the same way.
Analysis based on the key parts - not the entirety - of the ecosystem.	The analysis included in this report primarily draws on findings from the five key platforms assessed to be central to the mass shooting ecosystem. For a more comprehensive understanding of this ecosystem, in-depth studies of other platforms such as TikTok, Tumblr and X is recommended.
Possibility of false positive and incomplete coverage.	While every effort was made to ensure data was as complete and accurate as possible, it should be expected that a limited number of false positives remained within the quantitative findings. Additionally, posts on the platforms analyzed are regularly removed either by platform moderators or by the authors of the posts themselves. This may have impacted this project due to the mainstream nature of some of the platforms selected for analysis. Our collectors are designed to gather the data as soon as it is posted, but the time frame can vary from seconds to hours depending on the backend system of each collector. Therefore, it is reasonable to assume that a small percentage of posts over the time frame analyzed would have been removed and, therefore, would not have been captured in our dataset.

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