

RESEARCH ARTICLE

Uncovering the Bias and Prejudice in Reporting on Islamist and Non-Islamist Terrorist Attacks in British and US Newspapers

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Abstract: This article presents an empirical analysis that unveils systematic biases in how major US and UK print media outlets portray terrorist attacks carried out by Muslim versus non-Muslim perpetrators. Employing computational text analysis of a corpus spanning over 10,233 newspaper articles published in *The New York Times*, *The Washington Post*, *USA Today*, *The Guardian*, *The Daily Mail*, and *The Telegraph* from 2003–2018, the study reveals two key disparities. First, Muslim attacks tend to elicit more negatively valenced emotional language, which may cultivate fear and stigmatisation in Muslim communities. Second, such attacks garner greater sustained media attention over time compared to those committed by non-Muslims, which exhibit a sharper decline in coverage beyond the immediate aftermath. These differences in framing and agenda-setting illuminate how media representations can contribute to socially constructing particular forms of ideological violence as more existentially threatening. By empirically documenting biases in terrorism coverage, the article raises critical concerns about journalistic objectivity and the media's role in perpetuating prejudicial narratives that enable policies targeting Muslims while minimising other security threats. The findings underscore the urgency of promoting more responsible reporting practices and inclusive public discourse surrounding extremism and its underlying drivers.

Keywords: Media representation, terrorism, Islamophobia, framing, agenda setting, content analysis

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Introduction

In 2020, the Global Terrorism Index reported a 250 percent increase in far-right attacks in North America, Oceania, and Western Europe since 2014, with deaths increasing by 709 percent during the same period. Meanwhile, terror-related incidents carried out by Muslim extremists have decreased in the West.¹ Despite these trends, mainstream media outlets have tended to cover Muslim-perpetrated terrorist attacks more negatively than those committed by non-Muslims.² According to a recent study, attacks carried out by Muslims were 4.5 times more likely to receive media coverage than attacks committed by non-Muslims, demonstrating a striking difference in media attention depending on the identity of the perpetrator.³ While this and other studies have provided evidence of differences in the rate of media coverage depending on the identity of the perpetrator⁴, systematic, large-scale analysis of this phenomenon remains scarce. Additionally, there is limited analysis of the variations in language that the mainstream media uses to report on these various types of attacks.

To empirically assess whether disparity in the coverage of terrorist attacks is widespread among Western media outlets, this article analyses a corpus of 12,319 newspaper articles published in six prominent US and UK newspapers covering 32 high-casualty attacks committed between 2003 and 2018 by Muslim and non-Muslim perpetrators.⁵ Based on the results of computerised text analysis methods, this article suggests that, in addition to the difference in reporting frequency previously highlighted by other scholars, the reporting of terrorist attacks committed by Muslim and non-Muslim perpetrators differs in two other regards. First, terrorist attacks by non-Muslims tend to receive more intensive coverage in the first days after the attack, while Muslim-perpetrated attacks captivate media attention for a longer time post-attack. Second, when describing an attack by a non-Muslim, newspaper articles frequently use language with fewer negative connotations than when describing an attack by a Muslim perpetrator.

The significance of this research lies in its ability to elucidate the nature of differential representation found in media coverage of far-right and Islamist⁶ attacks. With the pervasiveness of Islamophobia in the post-9/11 period, there is a tendency to describe Muslim events and lives in Islamophobic terms, including in the media.⁷ The objective of the current study is to determine the disparity in representations of Muslim-perpetrated versus non-Muslim-perpetrated terror attacks in articles published over a fifteen-year period in mainstream US and UK newspapers. Alongside the rate of reporting, this research also provides important insight into differences in the language used in such reporting.

First, the article provides background on the framing of terrorism in media discourse and the role of perpetrator identity in shaping media narratives. It reviews relevant literature from critical terrorism studies, media studies, and related fields on media representations of Muslims and Islam. Second, the methodology section outlines the approach to data collection and analysis, including the selection of terrorist attacks from the Global Terrorism Database (GTD), the sampling of newspaper articles from major US and UK outlets, and the use of computational methods to analyse the linguistic characteristics and temporal patterns of media coverage. Third, the results section presents quantitative findings on differences in the emotional tone and volume of coverage between Muslim-perpetrated and non-Muslim-perpetrated attacks over time. Finally, the discussion examines the theoretical and social implications of the results, situating the findings within broader debates around media bias, agenda-setting, and the construction of risk perceptions. We argue that systematic disparities in media framing related to perpetrator identity can reinforce negative stereotypes, distort threat assessments, and further marginalise minority communities.

Terrorism and the Media

The framing of terrorism and its perpetrators has also been a key concern in critical terrorism studies, religious studies, and postcolonial literature.⁸ These fields offer valuable insights into the politics and power dynamics that shape dominant narratives around terrorism. Scholars in religious studies have examined how media representations can contribute to the ‘othering’ of Islam and Muslims. Edward Said’s seminal work highlights how reductive Orientalist tropes depicting Muslims as uncivilised and threatening have long pervaded Western media and political discourse.⁹ In the British press, reportage on Islam often reproduces a narrow set of stereotypes fixated on violence and cultural differences.¹⁰ Such patterns construe Muslims as a ‘suspect community’ and can fuel Islamophobia. Postcolonial theorists situate these representational practices within broader histories of empire and the unequal global power structures that endure today. The figure of the Muslim terrorist has become a key foil against which Western nations assert their supposed moral superiority.¹¹ This framing serves to justify military interventions abroad and the erosion of civil liberties at home, particularly for Muslims and those racialised as Muslims. Critical terrorism studies, in turn, challenge the field’s traditionally state-centric orientation to interrogate terrorism as a discursive category and tool of the powerful.¹² ‘Terrorism’ is not a neutral descriptor, but a label selectively applied to delegitimise certain acts of violence while sanctioning others.¹³ Critics have critiqued the disproportionate application of the ‘terrorist’ label to Muslims, even when other groups commit more attacks, as reflecting an Islamophobic bias.¹⁴

Despite a large amount of research on the media’s coverage of terrorist attacks and Muslim identity, there are still notable gaps in the literature, particularly surrounding linguistic differences in media reports and quantitative analysis of the coverage. Unsurprisingly, there is a significant body of literature looking at the media’s role and influence on public opinion and policymaking¹⁵, while there is a more specific sub-section of research that studies the nexus between the media and terrorism and violence.¹⁶ The literature on media coverage of terrorism and Muslims highlights several key themes relevant to the present study. First, the media plays a significant role in shaping public perceptions and policy responses to terrorist incidents.¹⁷ By selectively allocating attention to certain attacks, the media can signal to audiences that these events are worthy of concern and in need of solutions.¹⁸ The concept of “focusing events”¹⁹ is useful for understanding how dramatic, violent incidents like terrorist attacks can concentrate public attention in ways that create openings for policy change.

However, not all terrorist attacks receive equal coverage. Several factors have been shown to influence both the amount and nature of media attention, including perpetrator nationality²⁰, the number and identity of casualties²¹, and crucially, the perpetrator’s perceived religious affiliation.²² A robust body of scholarship documents pervasive negative biases in Western media representations of Muslims and Islam, particularly in the context of terrorism and violence.²³ These stereotypical portrayals have been linked to increased public support for policies that disproportionately target and harm Muslims.²⁴ The tone and emotionality of coverage appears to be a key mechanism driving these effects. The more threatening news coverage of terrorism elicits greater anxiety and hawkish policy attitudes among viewers.²⁵ Major American newspapers applied the “terrorism” label inconsistently when perpetrators were not linked to Islam, suggesting that the term itself carries an implicit Muslim association.²⁶ There is a qualitative difference in how media depict Muslims within the US (as largely peaceful) versus abroad (as dangerous), indicating that the geographic context of attacks may also shape representations.²⁷ The expectation that the identity of the perpetrator will influence the tone and duration of media coverage is rooted in the broader dynamics of media framing and agenda-setting.²⁸ As discussed earlier, the media plays a crucial role in shaping public perceptions

and policy responses by selectively emphasising certain aspects of an issue or event.²⁹ In the context of terrorism, the media's framing choices can powerfully influence how the public understands and evaluates the nature of the threat, the groups involved, and the appropriate societal responses.³⁰

Research has consistently shown that media framing of Muslims and Islam in Western contexts has been predominantly negative and stereotypical, often focusing on themes of violence, extremism, and cultural otherness.³¹ This pervasive pattern of representation can create an implicit association between Islam and terrorism in the public imagination, leading to heightened threat perceptions and support for punitive policies.³² From this perspective, the framing of a terrorist attack by a Muslim perpetrator as part of a broader narrative of Islamic extremism and civilisational conflict amplifies perceptions of fear and risk. In contrast, terrorist attacks committed by non-Muslim perpetrators, especially non-white perpetrators, are framed as isolated incidents or as the result of individual pathology, rather than as a systemic threat.³³ This differential framing can lead to a lower sense of collective danger and a quicker dissipation of public attention. The perpetrator's identity thus serves as a key heuristic cue that journalists and editors use, whether consciously or unconsciously, to guide their framing choices and determine the newsworthiness and salience of a particular attack.

These framing dynamics, in turn, shape the media's agenda-setting function by influencing the relative prominence and duration of coverage given to various attacks. In line with agenda-setting theory, the amount and prominence of coverage devoted to an issue or event is a strong indicator of its perceived importance and can significantly influence public attitudes and policy priorities.³⁴ By providing more extensive and prolonged coverage of attacks carried out by Muslim perpetrators, the media may heighten the salience of Islamic extremism as a political issue and maintain public attention on the perceived threat of Muslim violence. Conversely, by devoting less sustained coverage to attacks by non-Muslim perpetrators, the media may dampen the sense of urgency around other forms of extremist violence and limit public pressure for a robust policy response. Crucially, these framing and agenda-setting processes are not necessarily the result of deliberate bias on the part of individual journalists or news organisations. Rather, they reflect how cultural stereotypes, institutional routines, and market imperatives shape media content.³⁵ Nevertheless, by systematically privileging certain narratives and voices over others, media coverage can contribute to the reproduction of dominant ideologies and power structures, with significant implications for public attitudes and policy outcomes. Through this theoretical lens, examining the tone and duration of media coverage of terrorist attacks can provide valuable insights into how the perpetrator's identity shapes the social construction of risk and the perceived urgency of different forms of extremist violence. It can also throw light on the role of the media in reinforcing or challenging dominant narratives about Islam, terrorism, and national security. By empirically assessing these relationships, the present study aims to contribute to a more nuanced understanding of the complex dynamics of media representation and public opinion in the context of terrorism.

In terms of coverage duration, terrorist attacks, while rare, tend to attract disproportionate media attention relative to other violent crimes.³⁶ The 9/11 attacks in particular as a "made-for-television" event that commanded an exceptional degree of live, repeated coverage.³⁷ The concept of an "issue attention cycle"³⁸ has been applied to media coverage more broadly, suggesting a pattern whereby the salience of events spikes and then gradually declines. However, the rate of this decline differs across incidents in ways that may depend on perpetrator identity. Building on these insights, the present study aims to assess whether systematic differences exist in the tone and duration of US and UK media coverage of terrorist attacks based on the Muslim versus non-Muslim identity of perpetrators. By applying computational and quantitative techniques

to a large corpus of newspaper articles, we contribute evidence on specific linguistic and temporal disparities in coverage that may shed light on the mechanisms through which biased representations of terrorism are constructed and sustained in Western media discourse. Our focus on differential language use and the trajectory of coverage over time offers a novel perspective that complements existing work and provides a foundation for future comparative scholarship.

The focus on the emotional tone and duration of media coverage in this study is motivated by the recognition that these variables serve as important indicators of the media's underlying orientations and can have significant impacts on public perceptions and attitudes. The emotional tone of media coverage, as reflected in the use of language evoking fear, anger, or other affective responses, provides insight into the implicit frames and narratives that journalists and editors employ in their reporting. As discussed earlier, media framing plays a powerful role in shaping public understandings of terrorism and can influence the perceived severity of the threat and the groups or communities that are stigmatised as a result.³⁹ By systematically examining variations in the emotional tenor of coverage across attacks with Muslim versus non-Muslim perpetrators, this study aims to uncover patterns of bias and stereotyping that may contribute to the reproduction of Islamophobic sentiment and the construction of Muslims as a suspect community.⁴⁰ Moreover, the emotional tone of coverage has been shown to have direct effects on audience reactions and policy preferences. Experimental research has demonstrated that exposure to news stories that evoke fear and anger can lead to increased support for punitive and restrictive policies, such as military intervention, surveillance, and immigration restrictions.⁴¹ By documenting disparities in the affective framing of terrorist attacks based on perpetrator identity, this study can shed light on the potential role of the media in shaping public attitudes and creating a climate conducive to the erosion of civil liberties and the targeting of particular communities.

The duration of media coverage, as measured by the number of articles published over time and the rate of decline in coverage, serves as an indicator of the perceived newsworthiness and salience of different terrorist attacks. As agenda-setting theory posits, the amount and persistence of media attention devoted to an issue is a key determinant of its prominence on the public agenda. When the media provides sustained coverage of an attack over an extended period, it signals to audiences that the event is of high significance and warrants continued concern and engagement. Conversely, when coverage of an attack quickly dissipates, it suggests that the incident is of lesser importance and does not require prolonged public attention or policy action. By comparing the duration of coverage for attacks with Muslim versus non-Muslim perpetrators, this study aims to illuminate disparities in the perceived public significance of different forms of terrorism. If attacks by Muslim perpetrators consistently receive longer and more persistent coverage compared to similar attacks by non-Muslim perpetrators, it may indicate a media bias that privileges certain narratives of threat and contributes to the disproportionate focus of public attention on the spectre of Islamic extremism. Such disparities in coverage duration can have important consequences for policy priorities, resource allocation, and the overall shape of public discourse on terrorism and security. Examining the intersection of emotional tone and coverage duration further allows for a more nuanced understanding of how these dimensions of media coverage may interact to shape public perceptions over time. For example, if attacks by Muslim perpetrators are both framed in more emotionally charged terms and receive more sustained coverage compared to attacks by non-Muslim perpetrators, it suggests a compounding effect that may amplify public fears and policy responses in ways that disproportionately target Muslim communities.

By focusing on these critical aspects of media coverage and their potential impacts on public attitudes and discourse, this study aims to contribute to a more comprehensive understanding of the role of the media in constructing social and political responses to terrorism. Uncovering systemic disparities in coverage based on perpetrator identity can inform efforts to challenge biased reporting practices, promote more responsible journalism, and foster a more informed and inclusive public dialogue about the nature and scope of terrorist threats. At the same time, by illuminating the ways in which media coverage may contribute to the stigmatisation of particular communities and the erosion of civil liberties, this research can help to galvanise support for policies and initiatives that prioritise social justice, equality, and the protection of human rights in the face of terrorist violence.

Content and Discourse Analysis

There are five approaches identified as the most common for studying media content. The first is the hermeneutic approach, which provides an interpretation of the media frames within a certain cultural ecosystem.⁴² Second, the linguistic approach focuses on the placement and structure of words and sentences based on four characteristics: syntax, script, theme, and rhetoric.⁴³ Third, in the manual holistic approach, frames are identified within a sample of articles and defined within a codebook, after which the entire body of the text is also coded. However, this approach encounters a problem of external validity, as the frames are identified and created by researchers and are thus subject to confirmation bias. The fourth approach is known as the deductive approach, which essentially involves pre-defining the frames and coding units of analysis within a frame.⁴⁴ The final approach is the computer-assisted approach, which is used in this study.

The computer-assisted approach has been used to distil topics from textual datasets so large that comprehension cannot be feasibly attempted by reading them.⁴⁵ For example, this approach has been applied to a corpus of statistics literature composed of 2,500 news articles and 1,400 technical abstracts containing a total of more than 45,000 unique words.⁴⁶ Others have employed the computer-assisted approach to extract latent topics and frames from large textual datasets derived from other media, including internet forum posts,⁴⁷ educational materials,⁴⁸ as well as aviation incident reports.⁴⁹

While the computer-assisted approach offers the distinct advantage of facilitating the analysis of extremely large textual datasets, scholars seeking to analyse how terrorist incidents are reported in the media have traditionally eschewed computer-assisted approaches in favour of more traditional means of discourse analysis. For example, reporting of the neoconservative American political magazine *The Weekly Standard* showed that the religious identity of Muslim perpetrators was often conflated with their violent acts.⁵⁰ As such, this 'Muslim' identity is seen as a static concept directly associated with an entire religion. Furthermore, a 2011 survey of media coverage of terrorist attacks on US soil since 9/11 found that even if there was only spurious proof of the perpetrator having a link with Islam, it nonetheless became the central point in the coverage.⁵¹ The survey also showed that domestic non-Islamic terrorism (or "homegrown" terrorism) was considered much less important than Muslim terrorism, which was more often linked to a greater international threat. This domestic terrorism was also normalised, with more focus on the possible mental illness of the perpetrators.⁵²

A study of the representation of Muslims in US media found that Muslims were often represented as more aggressive than adherents of other religions.⁵³ Additionally, their identity was constructed in such a way as to draw a division between those of Muslim faith and the wider American public, suggesting that Muslim Americans have dual loyalties. Similarly, a quantitative critical discourse analysis of British newspapers also showed that Muslim and

Irish communities were often presented as having dual loyalties.⁵⁴ Finally, it is important to note that these representations of Muslim communities also differ depending on whether the communities are located inside or outside the country,⁵⁵ as found in a study of media coverage following 9/11. In the aftermath of an attack, domestic Muslim communities are framed as peaceful, whereas Muslims abroad are linked to notions of violent jihad.⁵⁶

Building on these works and working with larger datasets, scholars have recently begun to leverage computer-assisted approaches to study disparities in the way terrorist attacks are reported. For example, when focused on the differences in framing between UK and US news coverage and found that in the US, the coverage is largely event-oriented, whereas in the UK, the coverage seems to be more context-orientated.⁵⁷ Perhaps unsurprisingly, American newspapers generally advocated a military response to terrorism, which largely eschewed diplomatic options, whereas British newspapers tended to favour both diplomatic and military solutions. The causes underlying the disparities in media coverage of terrorist attacks remain unclear, however.⁵⁸ By employing both computer-assisted techniques and more traditional approaches, scholars have highlighted the importance of examining disparities not only in the frequency of coverage of terrorist attacks but also in the representation and framing of the event and the creation of perpetrator identity based on overt religious affiliation (or lack thereof). This is particularly important since the performativity of language has a certain degree of influence over an audience. As the media is seen as a meaning-maker for their audience, media discourse has a direct effect on the interpretation of events and their variables.⁵⁹ The choice of vocabulary and creation of perpetrator identity by the media are part of this entire process of meaning-making.

The literature surveyed thus far highlights the media's role in shaping public perceptions and discourses around terrorism. The specific mechanisms through which the identity of perpetrators may influence the emotional tenor and intensity of attack coverage, however, remain underexplored. The interplay between fear, terrorism, and media consumption offers a useful theoretical lens.⁶⁰ Drawing on a series of survey experiments, threatening media coverage of terrorism can significantly increase feelings of fear, anxiety, and risk perception among viewers.⁶¹ Importantly, it is found that the emotional tone of terrorism coverage is a stronger predictor of threat perceptions than the factual information conveyed. This suggests that variations in the affective dimensions of coverage based on perpetrator identity could have differential impacts on audience response. The concept of "coverage duration" from communication studies further illuminates how media attention to different types of attacks may vary. Incidents of terrorism tend to attract significantly more coverage compared to other violent crimes, indicating the media's tendency to allocate disproportionate space to these events.⁶² The idea of the "issue attention cycle" describes how coverage of major events evolves, with an initial spike in reporting followed by a gradual decline.⁶³ Crucially, they note that the pace of this decline can differ based on the perceived salience and resonance of the incident.

Together, this scholarship provides a theoretical basis for expecting that the identity of the perpetrator will shape both the emotional intensity and temporal scope of terrorism coverage. Given the prevalence of Islamophobic sentiment and the frequent conflation of Islam with terrorism⁶⁴, attacks by Muslim perpetrators may receive more threatening framing and total coverage than equivalent incidents by non-Muslim actors. Specifically, we hypothesise that:

H_1 : Media coverage of terrorist attacks by Muslim perpetrators will feature more negatively valenced emotional language compared to coverage of non-Muslim perpetrators.

H_{2a} : Attacks carried out by Muslim perpetrators will receive more overall media attention than attacks by non-Muslim perpetrators.

H_{2b}: Coverage of Muslim-perpetrated attacks will exhibit a slower rate of decline, remaining salient in the media for a longer duration relative to non-Muslim attacks.

Methodology

To analyse the existence of differences in the media's portrayal of terrorist attacks perpetrated by Muslims versus non-Muslims, this study involves three distinct steps. First, using the renowned Global Terrorism Database, we identified 32 major terrorist incidents, of which nineteen were carried out by Muslim perpetrators and the remaining thirteen by non-Muslims. Secondly, we selected newspaper articles from six major English-language newspapers focusing on each of these 32 attacks. Thirdly, the text of these articles was extracted and pre-processed for analysis.

Several key criteria guided the selection of terrorist attacks and media outlets for this study. First, we focused on attacks that occurred in Western Europe, Canada, and the United States between 2003 and 2018 to capture a period of heightened concern about terrorism post-9/11 while maintaining a degree of cultural and political similarity across the countries included. We initially identified attacks using the GTD, a comprehensive and widely used source that applies a consistent definition of terrorism across contexts.⁶⁵ To filter for incidents likely to attract significant media coverage, we selected attacks resulting in at least four fatalities, excluding perpetrators. This threshold aligns with prior studies of media coverage of terrorism⁶⁶ and provides an objective criterion for inclusion.

In terms of media sources, we focused on high-circulation newspapers based in the United States (*The New York Times*, *The Wall Street Journal*, and *USA Today*) and the United Kingdom (*The Times*, *The Daily Telegraph*, and *The Guardian*) to capture influential outlets across the political spectrum in two Western countries with significant global media reach. These outlets are also well-represented in major news databases like Factiva, enabling comprehensive coverage of our selected attacks. By including both broadsheet and tabloid newspapers, we account for potential differences in reporting styles and audiences. However, we acknowledge several limitations of these selection criteria. First, we cannot discuss potential differences in incident coverage in other regions due to distinct geopolitical and cultural factors, as we only include attacks in Western countries. Second, setting a relatively high casualty threshold means our findings may not generalise to less lethal attacks. Third, our focus on traditional print media does not capture the growing role of online and social media in shaping narratives around terrorism.

To mitigate the impact of these limitations, we employed several strategies in our analysis. First, in our models, we included the number of casualties as a covariate to account for the potential confounding effect of attack severity on media coverage. Second, we conducted sensitivity analyses using alternative casualty thresholds to assess the robustness of our findings. Finally, while our data does not directly address digital media, we situate our findings within the broader context of a changing media landscape and highlight this as a key area for future research. Despite these limitations, we believe our approach offers valuable insights into patterns of media coverage of terrorism in the Western context. We aim to provide a rigorous empirical foundation for understanding how the identity of perpetrators shapes the framing and narrating of these incidents for public consumption, by systematically analysing a large corpus of articles from influential news sources over a significant time period.

Methods

The data for this study comprises media coverage of terrorist attacks that had more than four fatalities (excluding the perpetrators in cases of suicide) and were carried out in Western Europe, Canada, or the United States between 2003 and 2018. All the attacks and their details are pulled from the Global Terrorism Database.⁶⁷ The minimum fatality criterion was introduced because the vast majority (95.3 percent) of incidents in the GTD involved no fatalities and therefore received minimal media coverage. Based on these conditions, 32 events were selected from the GTD dataset. Single events that the GTD split into multiple attacks, such as the 2004 Madrid bombings, were also merged into one event with a single perpetrator identity.

Table 1. Summary of Event Dataset (Casualties represents the sum of wounded and killed)

Event	Date	Country	Killed*	Wounded*	Ideological categories
Madrid attacks	2004-3-11	Spain	191	1,800	Al-Qaeda
London bombings	2005-7-7	UK	56	784	Al-Qaeda
Jokela School shooting	2007-11-7	Finland	9	13	Neo-Fascist extremists
Fort Hood shootings	2009-11-5	US	13	32	Jihadi-inspired extremists
Norway attacks	2011-7-22	Norway	77	75	Right-wing extremists
Wisconsin Sikh Temple shooting	2012-8-5	US	7	4	White supremacists/nationalists
Charlie Hebdo attacks	2015-1-7	France	17	15	Al-Qaeda in the Arabian Peninsula
Charleston Church shooting	2015-6-17	US	9	0	White supremacists/nationalists
Chattanooga Shootings	2015-7-16	US	6	2	Muslim extremists
Umpqua Community College shooting	2015-10-1	US	10	7	Incel extremists
Paris Attacks	2015-11-13	France	132	293	Islamic State of Iraq and the Levant
San Bernardino attack	2015-12-2	US	16	17	Jihadi-inspired extremists
Brussels bombings	2016-3-22	Belgium	35	270	Islamic State of Iraq and the Levant
Orlando Shootings	2016-6-12	US	50	53	Jihadi-inspired extremists
Dallas Police shooting	2016-7-7	US	6	9	Anti-White extremists
Nice truck attack	2016-7-14	France	87	433	Jihadi-inspired extremists
Munich shooting	2016-7-22	Germany	10	27	Anti-Immigrant extremists
Berlin Truck attack	2016-12-19	Germany	12	48	Jihadi-inspired extremists
Fort Lauderdale airport shooting	2017-1-6	US	5	6	Jihadi-inspired extremists
Quebec City Mosque shooting	2017-1-29	Canada	6	19	Right-wing extremists
Westminster attack	2017-3-22	UK	6	50	Muslim extremists
Stockholm Truck attack	2017-4-7	Sweden	5	14	Jihadi-inspired extremists
Manchester Arena Bombing	2017-5-22	UK	23	119	Islamic State of Iraq and the Levant
London Bridge attack	2017-6-3	UK	11	48	Jihadi-inspired extremists
Barcelona attacks	2017-8-17	Spain	20	107	Muslim extremists
Las Vegas shooting	2017-10-1	US	59	851	Anti-Government extremists
New York City truck attack	2017-10-31	US	8	13	Jihadi-inspired extremists
Stoneman Douglas HS shooting	2018-2-14	US	17	17	White supremacists/nationalists
Toronto ramming attack	2018-4-23	Canada	10	15	Incel extremists
Sante Fe High School shooting	2018-5-18	US	10	14	Neo-Nazi extremists
Pittsburgh Synagogue shooting	2018-10-27	US	11	7	Anti-Semitic extremists
Strasbourg attack	2018-12-11	France	5	11	Jihadi-inspired extremists

Overall, attacks carried out by Muslim perpetrators had 4,813 total casualties (i.e. dead or wounded), while those carried out by non-Muslims had a total of 1,299 casualties. Specifically, Muslim perpetrators caused the deaths of 698 people and wounded 4,115 within Western Europe, the United States, and Canada, whereas non-Muslim terrorists caused the deaths of 241 people and wounded another 1,058.

Newspaper Selection

We selected the six newspapers in this study based on their prominence, circulation, and influence in the US and UK media markets. For the United States, we selected *The New York Times*, *The Washington Post*, and *USA Today*. People widely regard *The New York Times* and *The Washington Post* as two of the most influential newspapers in the country, boasting a combined daily print and digital circulation of over 1.5 million and 1 million, respectively.⁶⁸ *USA Today* is the most widely circulated newspaper in the US, with a daily print and digital circulation of over 2.2 million.⁶⁹ Other media outlets, policymakers, and the public frequently cite all three newspapers due to their strong international focus.

For the UK, we selected *The Guardian*, *The Daily Mail*, and *The Telegraph*. *The Guardian* is a leading left-leaning newspaper with a daily print and digital circulation of over 110,000.⁷⁰ *The Daily Mail* is the UK's second-largest daily newspaper, with a circulation of over 980,000⁷¹, and is known for its conservative editorial stance. *The Telegraph* is another prominent right-leaning newspaper, with a daily circulation of over 310,000.⁷² These three newspapers represent a diverse range of political perspectives and have significant influence on public discourse in the UK. Given our focus on US and UK media coverage, we limited our analysis to terrorist attacks occurring within these two countries. We made this decision to ensure that the selected news outlets would likely devote significant attention to the incidents, given that media coverage of domestic events typically exceeds that of international events.⁷³ By focusing on attacks in the United States and the United Kingdom, we aim to capture the most salient and impactful incidents in terms of media attention and public interest.

To gather data representing the media coverage of these 32 events, we turned to the Factiva Global News database, from which we extracted relevant articles from the six selected newspapers, *The New York Times*, *The Washington Post*, and *USA Today* from the US, and *The Guardian*, *The Telegraph*, and *The Daily Mail* from the UK.⁷⁴ These newspapers were selected due to their wide readership, high posting frequency (as per Factiva), and their focus on a variety of social and economic news. In addition, *The New York Times*, *The Washington Post*, *The Guardian*, and *The Telegraph* are of the same type, namely daily broadsheet newspapers that have similar linguistic traits. To diversify the collected data, *USA Today* and *The Daily Mail* were added as middle-market or tabloid newspapers.⁷⁵ The timeframe for the collection of articles is from the day of the event up until four weeks post-event. This time period is chosen so as to achieve the potential for maximum correlation between the public and media agendas, making it an important period.⁷⁶

Attack Selection

To identify relevant terrorist attacks for this study, we relied on the GTD, a comprehensive and widely used source that applies a consistent definition of terrorism across contexts. We focused on attacks occurring in the United States and the United Kingdom between 2003 and 2018, a period that captures the heightened concern about terrorism in the aftermath of 9/11 while also providing a sufficiently long timeframe to observe potential changes in media coverage over time.

To minimise concerns about cherry-picking incidents, we applied an objective threshold for inclusion based on the number of fatalities. Specifically, we included all attacks that resulted in at least four deaths, excluding the perpetrators. Previous research suggests that attacks with higher casualty counts tend to receive more extensive media coverage,⁷⁷ which led us to choose this threshold. By setting a clear and consistent criterion for inclusion, we aim to mitigate potential biases in case selection and ensure that our analysis focuses on the most high-profile and impactful incidents.

However, we acknowledge that this approach has some limitations. First, if we focus solely on fatalities, we may exclude attacks that caused significant injuries or property damage but did not meet the four-death threshold. Second, our reliance on the GTD restricts our sample to incidents that align with the database's definition of terrorism, potentially excluding all instances of political violence. Despite these limitations, we believe that our approach provides a transparent and objective basis for case selection that helps to mitigate concerns about cherry-picking and ensures a focus on the most salient attacks in terms of media coverage and public interest.

Sample Characteristics

The final sample included 32 terrorist attacks meeting our inclusion criteria, with nineteen perpetrated by individuals classified as Muslim and thirteen perpetrated by non-Muslim individuals. To provide a more detailed picture of the attacks in our sample, we calculated descriptive statistics for key variables of interest.

In terms of fatalities, attacks perpetrated by Muslim individuals resulted in a total of 698 deaths ($M = 36.74$, $SD = 58.81$, $Mdn = 14$), while assaults perpetrated by non-Muslim individuals resulted in a total of 241 deaths ($M = 18.54$, $SD = 20.40$, $Mdn = 10$). The higher mean and median fatalities for Muslim-perpetrated attacks suggest that these incidents tended to be more lethal on average, although there was also greater variability in the number of deaths (as indicated by the larger standard deviation). Muslim-perpetrated attacks resulted in a total of 4,115 injuries ($M = 216.58$, $SD = 518.39$, $Mdn = 48$), compared to 1,058 injuries for non-Muslim-perpetrated attacks ($M = 81.38$, $SD = 231.15$, $Mdn = 14$). Again, the higher mean and median values for Muslim-perpetrated attacks suggest that these incidents tended to result in more injuries, with greater variability across attacks. It is important to note that these descriptive statistics are based on a relatively small sample of high-profile attacks and may not be representative of all terrorist incidents during this period. Moreover, the larger standard deviations for Muslim-perpetrated attacks indicate greater variability in the scale of these incidents, which could potentially skew the overall figures. Nonetheless, these statistics provide valuable context for understanding the nature of the attacks included in our analysis and highlight the importance of accounting for potential differences in attack severity when examining media coverage.

Accounting for Attack Severity

Given the descriptive statistics presented above, our sample has significant differences in the average number of fatalities and injuries between Muslim-perpetrated and non-Muslim-perpetrated attacks. To account for this imbalance and its potential impact on media coverage, we included measures of attack severity as covariates in our analyses.

Specifically, for each attack, we recorded the total number of fatalities (excluding perpetrators) and the total number of injuries. All models examining differences in media coverage between Muslim-perpetrated and non-Muslim-perpetrated attacks included these two variables as

covariates. By statistically controlling for the severity of each incident, we can more accurately assess the independent effect of perpetrator ideology on media coverage, above and beyond any differences in the scale of the attacks themselves.

In our main analyses, we used the raw counts of fatalities and injuries as covariates. However, to ensure the robustness of our findings, we also conducted sensitivity analyses using log-transformed counts and categorical measures of attack severity (e.g. attacks with 0–10 fatalities, 11–50 fatalities, etc.). These alternative specifications yielded substantively similar results to our main findings, suggesting that the observed differences in media coverage are not solely a function of differences in attack severity.

It is important to note that including fatalities and injuries as covariates helps to mitigate the impact of imbalanced attack severity on our findings, but it does not completely eliminate this issue. These measures may not fully capture other aspects of attack severity, such as the symbolic significance of the target and the level of property damage. Nonetheless, by explicitly accounting for the two most salient measures of attack severity in our analyses, we aim to provide a more rigorous and unbiased assessment of the relationship between perpetrator ideology and media coverage.

Data Sources and Limitations

The GTD is widely recognised as one of the most comprehensive and reliable databases of terrorist incidents worldwide, covering events from 1970 to the present.⁷⁸ However, it is important to acknowledge and discuss the potential limitations and biases inherent in this data source. First, the GTD is based on publicly available information, primarily drawn from media reports and other open-source materials. This reliance on media reporting means that the database may be subject to the same biases and limitations as the media itself, such as underreporting certain types of incidents or overemphasising more sensational attacks.⁷⁹ Moreover, media coverage of terrorism can vary across countries and time periods, which may affect the consistency and completeness of the data. Second, the GTD's definition of terrorism, while widely accepted, is not without controversy. The database defines terrorism as “the threatened or actual use of illegal force and violence by a non-state actor to attain a political, economic, religious, or social goal through fear, coercion, or intimidation”.⁸⁰ The definition may not encompass all forms of political violence, or its application may vary across different contexts. Additionally, the classification of an incident as terrorism can be subject to political and ideological biases, both in the media reporting and in the coding process itself. Third, while the GTD makes efforts to verify and triangulate information from multiple sources, the accuracy and completeness of the data may vary depending on the availability and reliability of the information for each incident. Attacks in countries with limited media freedom or in conflict zones may restrict access to information, making this particularly true.

Another limitation of the current study is its focus on a specific set of Western countries (the United States and the United Kingdom) and a limited number of media outlets within those countries. While this focus allowed for a detailed analysis of high-profile attacks and influential newspapers, it does limit the generalisability of the findings to other geographical and media contexts. Future research could expand the scope to include a more diverse range of countries and media sources, including non-Western and non-English language outlets, to provide a more comprehensive understanding of global media coverage patterns. Additionally, incorporating a wider variety of media types, such as television, radio, and digital-only platforms, could offer valuable insights into potential differences across media formats. Despite these limitations, we believe that the GTD remains the best available source for systematically identifying and comparing terrorist attacks across countries and time periods. By focusing on high-profile

attacks with significant casualties, we aim to mitigate some of the potential biases in media reporting and data collection. We recognise the limitations of our findings and urge future research to further scrutinise and enhance the data sources and methodologies employed in the study of terrorism and its media coverage.

Data Processing

Factiva contains both print and online media sources, both of which are considered in this study. A search query was built around each of the 32 terrorist events we examined. The challenge in creating these search queries was that they needed to be as inclusive as possible while excluding less relevant material. For example, the query for the Madrid attack was first composed so that only articles including the terms “attack” and “Madrid” were included. However, this also returned articles about the members of the Real Madrid football club who play in attack positions. Consequently, more precise terms were used. Each search query was designed to find the name of the perpetrator and the city within a timeframe from the event to four weeks afterwards. These search queries yielded 12,319 articles, containing a total of 11,783,758 words. After further analysis of the entire dataset, 2,096 articles were removed. These were either duplicates, video/picture descriptions, or irrelevant articles. The final dataset included 7,349 articles about attacks perpetrated by Muslims and 2,874 about attacks perpetrated by non-Muslims, for a total of 10,223 articles.

The data were coded for whether the perpetrators of the terrorist attacks were Muslim or non-Muslim. As there were no events involving multiple perpetrators of different faiths, the coding is binary without exception. It is important to note that this variable is not a dichotomy between a religious identity (Muslim) and a political identity (right-wing). Rather, it is a comparison between perpetrators who are Muslim and those who are affiliated with any other religion or political identity. Hence, it contrasts the presence versus absence of Muslim faith regarding the perpetrator(s). Events are coded as being carried out by a Muslim if the perpetrator was recognised as being Muslim by the GTD, while any other non-Muslim affiliation that is indicated by the GTD is coded as non-Muslim in the dataset.

Measuring Reporting Bias

In this analysis of whether language use differs depending on the identity of the perpetrator, the dependent variable is the word choice in the articles selected. For other topics such as global warming or taxation, word choice has been shown to have some degree of influence on public perception of an issue.⁸¹ Thus, if the media uses different terminology to describe the perpetrator of an attack or chooses to focus more on specific traits such as religion, this can also be expected to affect public perception of the issue.

The aspect of word choice we focus on in this study is the tone or sentiment of the words. For example, the sentiment of the words used in an article may be more or less negative depending on the identity of the perpetrator. This variable is calculated using the Linguistic Inquiry and Word Count programme (LIWC). The LIWC assesses the tone of a text using a calculation that analyses the positive and negative sentiment expressed in a body of text, drawing on previous research on linguistic markers of psychological change.⁸² For this study, we used the LIWC to measure the tone (sentiment) of each article on a 100-point scale. Between 1 and 39 is considered a negative article, between 40 and 59 a neutral article, and between 60 and 100 a positive article.

The null hypothesis for this analysis is that there is no statistical relationship between the sentiment of the article and the identity of the perpetrator. However, if there is a difference

in sentiment depending on the identity of the perpetrator, we can accept the first hypothesis (presented as H1 above). See Table 2 below.

Table 2: Comparing Media Tone Towards Muslim vs Non-Muslim Perpetrators

Comparison	$\hat{\psi}$	Standard Error	95% CI	p-value
The Daily Mail: Muslim vs. Non-Muslim	0.668	1.368	-8.515 to 4.860	0.67
The Telegraph: Muslim vs. Non-Muslim	-1.997	0.784	-5.464 to 0.428	0.008
USA Today – Muslim vs. Non-Muslim	-6.199	1.178	-10.678 to -2.194	p < .001
The New York Times: Muslim vs. Non-Muslim	-5.661	0.734	-8.481 to -3.038	p < .001
The Washington Post: Muslim vs. Non-Muslim	-4.088	0.865	-7.080 to -0.730	p < .001
The Guardian: Muslim vs. Non-Muslim	-2.604	0.908	-5.807 to 0.4878	0.002

Note: The $\hat{\psi}$ column is the difference between the trimmed means of the compared groups. Significance is implied when the confidence interval does not cross zero. It should be noted that the p value can be influenced by sample size, considerable sample sizes can lead to a decrease in p values. As detailed in Knaub: “Taken to the extreme, with infinite, sample sizes, the attained significance level will be zero even when there is only a very small, but finite difference between the null hypothesis and the true state of nature.” Given the sample size for this analysis, 5,000 bootstrap samples, the confidence interval is better suited as a measurement of significance. Under these conditions, there is a significant difference in the tone of the article depending on whether the perpetrator is Muslim or not, within three newspapers: *USA Today*, *the New York Times* and *the Washington Post*.

Measuring the Intensity of Coverage

The timeframe that the media allots to coverage of a given issue is an indicator of agenda-setting, or media issue salience, which in turn influences public opinion and policy making. Additionally, the interest of the media in a particular issue can be assessed by investigating the attention given to it, measurable as the frequency with which the topic appears in the news cycle. As Factiva also extracts the publishing date for each article, the frequency of posting can also be assessed and compared with the identity of the perpetrator, giving further insight into the agenda-setting efforts (if any) of the media.

The second dependent variable in the analysis therefore concerns the frequency of articles published about the terrorist attacks and the ‘rate of decay’. The rate of decay can be understood as the amount of time it takes for reporting on an event to cease or noticeably diminish. Specifically, the rate of decay refers to the speed at which newspapers stop covering a specific issue, thus making it disappear from the public agenda. In this case, a steep rate of decay indicates intense coverage immediately post-event and less long-term coverage, which may result in a lesser effect on public perception. A gradual rate of decay, on the other hand, indicates that the issue remains for a longer time in the news and, consequently, on the public agenda.

Through this analysis, we aim to evaluate the second hypothesis (H_2 above), namely that the intensity of coverage of a terrorist attack differs depending on whether the perpetrator is Muslim or non-Muslim. The null hypothesis for this part of the study is that terrorist attacks are covered for the same time period and with the same intensity, regardless of the perpetrator.

Correcting for Death Counts and Casualties

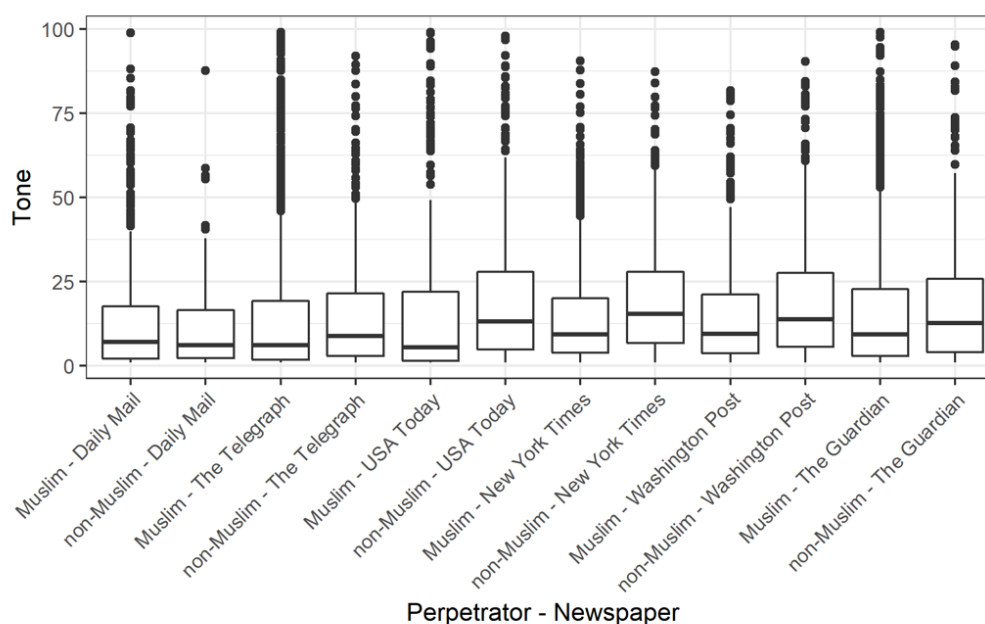
Previous studies have shown that public and media reactions are also dependent on the scale or methods of the terrorist attacks. These aspects should, therefore, be taken into consideration as potential confounding variables. In the case of high-casualty events such as 9/11 and the Madrid bombings, trust in the media increased immediately post-event, stressing their role in defining the narrative.⁸³ In the case of 9/11, an empirical study in its immediate aftermath revealed that beliefs and attitudes about matters of national interest were altered when individuals were stimulated to feel fear or anger.⁸⁴ Worryingly, the study showed that when anger was stimulated, individuals showed a preference for more punitive government policy; combined with media narratives on attacks, this can have a dramatic effect on the perception of risk.⁸⁵ In addition, a study on the coverage of terrorism in *The New York Times* from 1980 to 2001 showed that the newspaper would be more likely to cover high-casualty attacks rather than low or no-casualty attacks.⁸⁶ Muslim-specific suicide attacks also garner significantly more attention among print and television outlets.⁸⁷ This could have a considerable effect on the analysis of Muslim versus non-Muslim attacks. Just as the number of casualties also affects the media coverage, there is also an important link between whether the attack is carried out by a lone wolf or a group. Overall, the number of casualties, attack type, and perpetrator type are expected to affect the media posting frequency, but not necessarily the language used. When possible, these variables are accounted for in the analysis, although it is difficult to completely eliminate such variables as potential confounds.

Analysis

Sentiment Analysis

To determine if the perpetrator and newspaper have any effect on the sentiment conveyed by the word choice (i.e. the tone value), an analysis of variance (ANOVA) with post-hoc tests was conducted to determine whether there is a significant difference between the mean tone value of different groups of articles. The combination of the six newspapers with the binary variable of perpetrator identity resulted in twelve groups for the ANOVA; in other words, there were two groups for each newspaper, one for articles about non-Muslim perpetrators and another for articles about Muslim perpetrators. The groups are labelled in the following format: perpetrator: newspaper. The grouped dataset is visualised in Figure 1 below.

Figure 1: Tone Analysis



The boxplots in Figure 1 visualise the distribution of tone values for articles covering attacks by Muslim perpetrators versus non-Muslim perpetrators across the six analysed newspapers. The horizontal line in each boxplot indicates the median tone value. The boxes show the interquartile range, while the whiskers indicate variability outside this range. What is evident from the graph is that for three newspapers – *The New York Times*, *The Washington Post*, and *USA Today* – the media tone is distinctly more negative (lower values) when covering attacks perpetrated by Muslims compared to non-Muslims. This is shown by the lower median value and overall distribution of tone scores for the “Muslim” groups compared to the “non-Muslim” groups within each newspaper. For example, in *The New York Times*, the median tone value is approximately 52 for articles about attacks by Muslim perpetrators, compared to over 57 for non-Muslim attacks. The interquartile range is also lower for the Muslim group. This pattern demonstrating a more negative tone for Muslim attack coverage holds for *The Washington Post* and *USA Today* as well. In contrast, for the other three newspapers shown—*The Guardian*, *The Daily Mail*, and *The Telegraph*—there is less clear visual evidence of differences in tone between articles on Muslim versus non-Muslim attacks.

Since the analysis here is focused on the effects of more than two levels of just one factor (perpetrator-newspaper) on the experimental result (tone), a robust one-way ANOVA is the most suitable option. For this dataset, Welch’s F Ratio, which is used when assumptions of homogeneity of variance are not met, is $F(11, 1995) = 1145, p < 0.001$,¹⁶ which indicates that the mean tone differs significantly across the 12 groups.⁸⁸ Robust ANOVA methods estimate statistics that are reliable even when the normal assumptions of the data are not met. These methods are mainly based on bootstraps and trimmed means.⁸⁹ There are other methods to compensate for the violation of assumptions; however, robust methods generally control the Type I error rate, which is the main concern of this analysis. Therefore, a robust ANOVA with 20 percent trimmed means was performed with 5,000 bootstrap samples. A robust ANOVA suggests that the tone of the article does differ significantly across the twelve groups ($F_t = 18.26, p < 0.001$).

After conducting an ANOVA, further analysis is required to determine exactly how the different groups contrast with one another. This is commonly known as a post-hoc test, which consists of pairwise comparisons designed to compare all different combinations across the chosen groups. However, since the assumptions of homogeneity of variance have not been met, the post-hoc tests must also be robust, using the same parameters as for ANOVA. Under these conditions, there is a significant difference in the tone of the article depending on whether the perpetrator is Muslim or not, within three newspapers: *USA Today*, *The Washington Post*, and *The New York Times*. The exact results of this can be found in Table 2. To summarise, there are clear differences in the way Muslim perpetrators are treated by the media in comparison to their non-Muslim counterparts. On the one hand, both commit extreme acts of violence against civilians with varying degrees of casualties, but they are not covered in the same way. The difference in trimmed means for tone ($\hat{\psi}$) shows that Muslim perpetrators are consistently covered more negatively. In the case of *The Daily Mail*, the difference between Muslim versus non-Muslim articles was extremely large, deviating from the range seen in the other newspapers.

To determine if the perpetrator and newspaper have any effect on the sentiment conveyed by the word choice (i.e. the tone value), an analysis of variance (ANOVA) with post-hoc tests was conducted to determine whether there is a significant difference between the mean tone value of different groups of articles. The combination of the six newspapers with the binary variable of perpetrator identity resulted in twelve groups for the ANOVA; in other words, there were two groups for each newspaper, one for articles about non-Muslim perpetrators and another for articles about Muslim perpetrators. The groups are labelled in the following format: perpetrator: newspaper. The grouped dataset is visualised in Table 3 below.

Table 3: Regression Table of Articles Released Per Day Per Newspaper

Dependent variable: Percentage of articles released per day - Regression

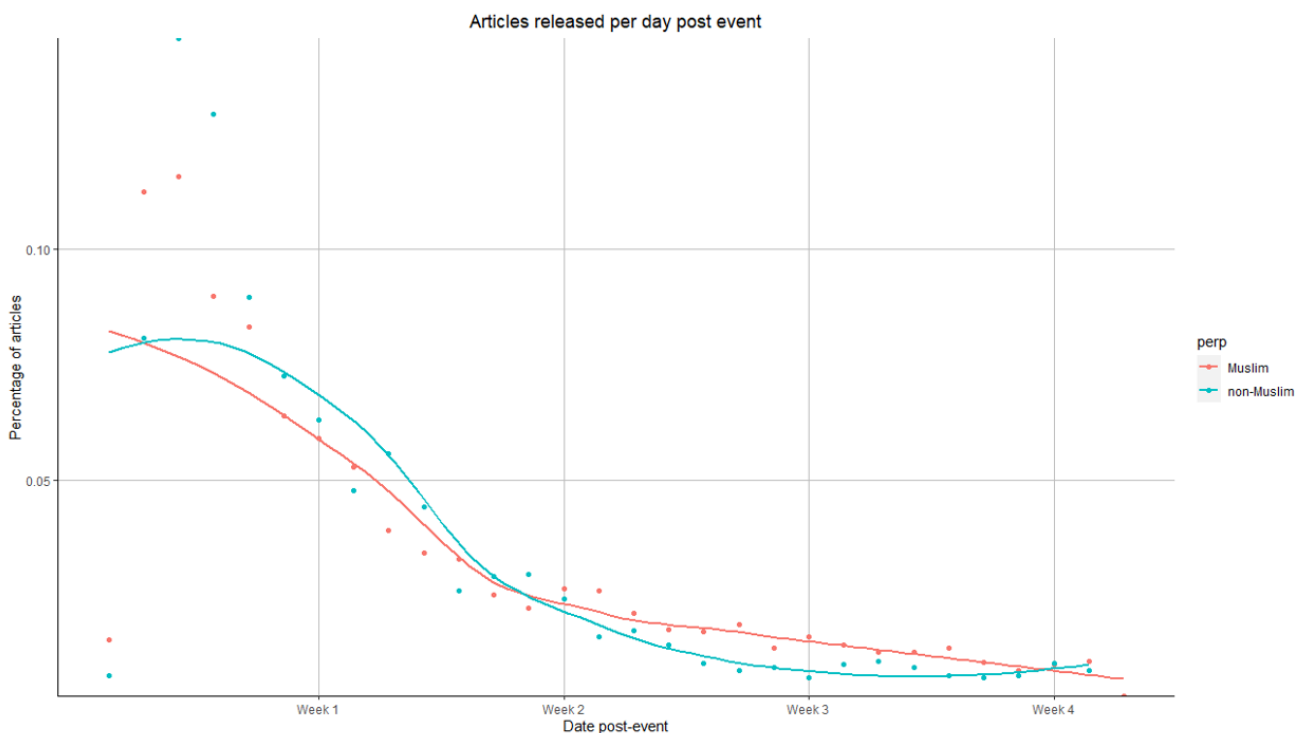
	Percentage											
	Daily Mail Muslim perpetrator	Daily Mail non-Muslim perpetrator	New York Times Muslim perpetrator	New York Times non- Muslim perpetrator	The Guardian Muslim perpetrator	The Guardian non-Muslim perpetrator	The Telegraph Muslim perpetrator	The Telegraph non-Muslim perpetrator	USA Today Muslim perpetrator	USA Today non-Muslim perpetrator	Washington Post Muslim perpetrator	Washington Post non- Muslim perpetrator
Slope of regression model	-0.000*** (-3.22*10 ⁻⁵)	-0.000*** (-6.42*10 ⁻⁵)	-0.000*** (-2.68*10 ⁻⁵)	-0.000*** (-3.45*10 ⁻⁵)	-0.000*** (-3.11*10 ⁻⁵)	-0.000*** (-3.73*10 ⁻⁵)	-0.000*** (-3.38*10 ⁻⁵)	-0.000*** (-4.75*10 ⁻⁵)	-0.000*** (-4.00*10 ⁻⁵)	-0.000*** (-4.00*10 ⁻⁵)	-0.000*** (-3.54*10 ⁻⁵)	-0.000*** (-3.38*10 ⁻⁵)
Constant	0.074*** (0.010)	0.115*** (0.018)	0.067*** (0.006)	0.076*** (0.010)	0.072*** (0.007)	0.079*** (0.010)	0.076*** (0.008)	0.091*** (0.014)	0.083*** (0.010)	0.083*** (0.010)	0.080*** (0.005)	0.083*** (0.007)
Observations	30	19	30	29	30	29	30	28	29	29	29	28
R ²	0.452	0.511	0.573	0.490	0.629	0.504	0.566	0.460	0.552	0.517	0.774	0.679
Adjusted R ²	0.433	0.482	0.557	0.471	0.616	0.486	0.551	0.439	0.535	0.500	0.766	0.666
Residual Std. Error	0.027 (df = 28)	0.042 (df = 17)	0.018 (df = 28)	0.026 (df = 27)	0.019 (df = 28)	0.028 (df = 27)	0.023 (df = 28)	0.038 (df = 26)	0.027 (df = 27)	0.029 (df = 27)	0.014 (df = 27)	0.019 (df = 26)
F Statistic	23.137*** (df = 1; 28)	17.736*** (df = 1; 17)	37.502*** (df = 1; 28)	25.967*** (df = 1; 27)	47.445*** (df = 1; 28)	27.434*** (df = 1; 27)	36.531*** (df = 1; 28)	22.139*** (df = 1; 26)	33.247*** (df = 1; 27)	28.953*** (df = 1; 27)	92.719*** (df = 1; 27)	54.948*** (df = 1; 26)

Note: * p<0.1; ** p<0.05; *** p<0.01

Frequency Analysis

This section concerns the number of articles released over a four-week period post-event and how that differs depending on the perpetrator and the newspaper. The first part examines the relationship between the number of articles and perpetrator type, regardless of the newspaper; the second part examines the number of articles published as a function of both newspaper and perpetrator type. The results in this section inform us about the salience of the issue for the media, as discussed in the literature on agenda-setting. There are several indicators from which we can ascertain media salience. Here, we plot the number of articles released about the attacks over time, including a line of best fit to highlight the trends in the data. The slope of this line can indicate the rate at which the topics ‘die down’. For example, a gradual slope indicates that the topic survives beyond the initial ‘shock’ of the attack and persists over a longer period, indicating higher media salience. Moreover, this slope can be compared between the two types of perpetrators (Muslim or non-Muslim). It is important to note here that casualties, which are unequally distributed, are likely to have an impact on the number of articles released but cannot easily be controlled due to the structure of the dataset. Thus, the rate of decay is measured as the percentage of the total number of articles released about a specific event per week post-event. This mitigates the difference in casualties and the absolute number of articles and allows for easier comparison between non-Muslim- and Muslim-perpetrated attacks, as shown in Figure 2 below.

Figure 2: Coverage of Attacks



This plot suggests that there is a higher initial ‘shock’ and a steeper downward slope when the perpetrator is non-Muslim. In contrast, reporting about Muslim perpetrators shows a lower initial percentage but a less steep downward slope, indicating higher media salience over time. However, it is important to note that the difference could also be affected by factors other than perpetrator identity, such as the number of casualties, which is potentially a confounding variable. Given this, and due to the relatively low numerical differences between the regression lines, the results cannot be considered conclusive for all newspapers collectively.

However, when we look at individual newspapers, some notable trends become apparent. In particular, it is clear that some newspapers have a much sharper decrease in the rate at which they cover non-Muslim attacks. In particular, for *The Daily Mail*, *The New York Times*, *The Guardian* and *The Telegraph*, the decrease is much sharper when the perpetrator is non-Muslim, indicating that after the initial 'shock' of the terrorist attack the newspaper no longer covers the event. This points to lesser media salience when the perpetrator is non-Muslim versus Muslim and could be the result of bias by those specific media outlets. However, this is not the case for *USA Today* and *The Washington Post*. The former covers both types of attacks to the same degree over time; meanwhile, the coverage of the Washington Post diminished more rapidly when Muslims perpetrated the attack. It is important to note, however, that as with the previous analysis, this decrease does not account for the confounding potential of the casualties per attack, which has a potential impact on the slopes calculated in Table 3 in the appendix. Thus, it is impossible to draw these inferences conclusively.

In summary, these findings offer preliminary evidence that a terrorist attack is accorded less media salience when the perpetrator is non-Muslim. The patterns of reporting frequency of *The Daily Mail*, *New York Times*, *The Guardian*, and *The Telegraph* indicate a high initial reaction to non-Muslim attacks but a low after-event reaction or recall of the event. This is the opposite for Muslim attacks, where there is a comparatively lower initial reaction but a longer recall and thus media issue salience.

Discussion

The results of this study suggest that the way the print media cover terrorist incidents varies depending on the perpetrator of the attack. This supports the first hypothesis, indicating a statistically significant difference in the coverage of attacks by Muslims compared to those by non-Muslims. The results show that there is increased usage of negative words if the perpetrator is Muslim, a different pattern of article publication, and a difference in word usage. When the perpetrator is Muslim, the greater use of words linked to negative emotions can be indicative of a different perspective on the media. The different usage suggests a heightened level of fear when the perpetrator is a Muslim. Upon closer inspection of the articles, it becomes clear that while non-Muslim perpetrators are often associated with gun violence, mental illness, and mass murder or shooting, Muslim perpetrators are directly associated with terrorism, potentially influencing public perception. Finally, the difference in frequency of coverage suggests that when the perpetrator is non-Muslim, the highest rate of coverage occurs during the first week following the event, with little recall of the attack later. When the perpetrator is Muslim, however, there is a higher rate of coverage later in the four-week post-event period, resulting in higher media salience.

In general, the public tends to forget events that receive brief coverage compared to those that receive longer post-event coverage.⁹⁰ This study has found that the difference in reporting manifested itself in media salience, as Muslim-perpetrated attacks received more negative and lengthy coverage. On the other hand, the media covered non-Muslim-perpetrated attacks more intensely in the first week, but much less afterwards. However, a non-Muslim attack exposes the public to the story more briefly than Muslim-specific attacks. As a result, a Muslim-related attack is more likely to generate discussion for a longer period of time. We must interpret this in the context of agenda-setting, given that a prolonged media presence impacts public awareness of the issue. This finding has far-reaching implications, as significant linguistic differences between Muslim and non-Muslim perpetrators are associated with anxiety and negative emotions towards Muslims.

These findings offer strong confirmation of the core tenets of agenda-setting theory concerning the media's power to shape issue salience and public attitudes.⁹¹ Conceptually, the research highlights the need for greater consciousness around coverage biases that may cultivate inaccurate perceptions and fears surrounding social groups. However, some limitations include the inability to definitively account for potential confounds, such as the number of casualties, and conclusively ascertain the real-world impacts of observed differences. Further research incorporating additional data and methods would strengthen causal claims. Overall, the article contributes to the body of knowledge by demonstrating how identity influences how the media tells stories, supporting theories about how the media affects people, bringing up policy issues related to representation, and suggesting ways to investigate these things in more depth.

Further research is necessary to address limitations and strengthen the validity of the inferences made, even though this study makes an important contribution in demonstrating differences in media coverage of terrorist attacks correlated with perpetrator identity. More research that considers the unequal effect of deaths on the rate of decay would show if identity affected the length of coverage. Also, it is important to use both quantitative linguistic analysis and targeted qualitative coding to prove that negative language is more likely to come from negative media portrayals of Muslims than from other complex contextual factors that affect language use. Some possible approaches are: collecting articles that use very negative language to see if the negativity specifically targets Muslims; conducting granular sentiment analysis of language used to describe perpetrators, communities affected, and policy issues to find out where tone differences are happening; and using collocation analysis to see if there are links between words like "extremist" and direct mentions of "Muslim." Employing mixed methods and isolating confounding variables would place conclusions about biased coverage of Muslim perpetrators on firmer empirical ground. The phenomena this research aims to uncover warrant such methodological rigour, given their profound social implications.

Conclusion

The results of this large-N analysis and its limitations clearly indicate the need for further systematic research on this topic. Larger media studies could greatly benefit the media, the public, and academia by shedding light on how the media shapes public opinion. Furthermore, while this study concentrated on the media's output, it is crucial to also examine the impact of this coverage on public opinion. Future research should specifically investigate the impact on public opinion when language usage varies based on the ethnicity or religion of the offender.

This study's findings provide strong empirical support for key tenets of agenda-setting theory. Agenda setting posits that media coverage plays a vital role in determining the salience and priority of issues and events on the public agenda. This study found unambiguous evidence that print media coverage of terrorist attacks differs systematically based on whether the perpetrator is Muslim or non-Muslim. Specifically, attacks by Muslims receive more frequent and sustained coverage over time than non-Muslim attacks. Agenda setting plays a crucial role in determining the salience of issues through media attention. The findings suggest that the perpetrator's identity shapes media judgements of newsworthiness and what issues consume public attention. The tone analysis also shows media language differs in covering Muslim versus non-Muslim attacks. This relates to the idea that the media not only tells us what to think about, but also how to think about issues. Together, this demonstrates the media's power to set the public agenda regarding terrorism and attitudes towards social groups. The differences based on perpetrator identity suggest that coverage may cultivate negative perceptions of Muslim communities. It also risks minimising threats from other forms of extremist violence. These

results show that the media covers terrorist attacks differently depending on who did them. This is in line with the main ideas of agenda-setting theory. This highlights the need for greater awareness of how media judging newsworthiness based on specific attributes, such as identity, shapes public discourse and policy.

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Dr. Amarnath Amarasingam is an associate professor specialising in terrorism, radicalisation, and religion. He teaches at Queen's University in Canada. He has authored books and articles on these topics, given presentations at conferences, and conducted interviews with major media outlets.

Prof. Tahir Abbas is a leading expert in radicalisation studies at Leiden University. He has extensive experience researching extremism and counter-terrorism at universities and government institutions worldwide. His current work explores social exclusion, religious spaces, and decolonial approaches to counter-terrorism.

Endnotes

1 Institute for Economics and Peace, "Global Terrorism Index 2020: Measuring the Impact of Terrorism," November 2020, <http://visionofhumanity.org/app/uploads/2020/11/GTI-2020-web-1.pdf>.

2 Ethical Journalism Network, "Muslims in the Media: Bias in the News: Reporting Terrorism," 2020, <https://ethicaljournalismnetwork.org/bias-news-reporting-terrorism>

3 Christopher A. Bail, *Terrified: How Anti-Muslim Fringe Organizations Became Mainstream* (Princeton University Press, 2014); Erin M. Kearns and Amarnath Amarasingam, "How News Media Talk About Terrorism: What the Evidence Shows," *Just Security*, April 5, 2019, <https://www.justsecurity.org/63499/how-news-media-talk-about-terrorism-what-the-evidence-shows/>.

4 When referring to "perpetrator" in this paper, we only consider the individual(s) who carried out the violence. This means that the identity of the affiliated group or organisation is not included in this analysis, nor is group affiliation alone used to define an attack as perpetrated by a Muslim or a non-Muslim. The purpose of this is to avoid in-group divisions and emphasise the difference in coverage that is based only on the religious variable.

5 For this study, we selected the time period of 2003--2018 to capture media representations in the post-9/11 era, when the seminal attacks of 9/11 heavily influenced terrorism discourse. Using 2003 as a starting point allows for an examination of this pivotal period when discourse and policies around terrorism, particularly those involving Muslim perpetrators, underwent significant shifts. By concluding the analysis in 2018, we can ensure that the data accurately reflects recent media coverage, which is crucial for comprehending contemporary portrayals, while keeping the sample size manageable and avoiding potential confounding effects from the subsequent global covid-19 pandemic.

6 Due to their association with political violence and extremism, "Islamist" and "Islamism" are loaded. This unfairly casts a wide range of Islamic thought and practice in a negative light. Critics say the terms confuse political movements with religious ideology, obscuring the many political interpretations and applications of Islamic principles. Due to their imprecision, the terms cover a wide range of actors and movements with varying degrees of political commitment or interpretations of Islam. Despite these drawbacks, using these terms with nuance and explanation may be analytically useful. Differentiating between Islamist political parties that want to peacefully participate in democratic processes and those that want to overthrow governments can illuminate political Islam. Understanding the evolution of Islamist movements over time or across geographical contexts requires a nuanced use of the term, acknowledging its limitations while recognising its potential to illuminate specific political phenomena.

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