

Immediate Study about Themes Emerged in the Twitter Posts about the Roe v. Wade Leaked

Xinyang Xiong^{1,a,*,†}, Kaiki Xiong^{2,b,†}, Jiawei Luo^{3,c}, Yifan Duan^{4,d,&}, Xiaoyan Zheng^{5,e,&}

¹*Communication&Media, University of Liverpool, Liverpool, L697ZX, United Kingdom*

²*Basis International School Park Lane Harbour, Huizhou, 516082, China*

³*Green Hope High School, Cary, 27519, United States*

⁴*College of Humanities, Arts and Social Sciences, University of California, Riverside, 92507, United States*

⁵*Maynooth International Engineering College, Fuzhou University, Fuzhou, 350108, China*

a. hsxxion3@liverpool.ac.uk, b. kaikixiong8184@gmail.com, c. luojiawei2006@gmail.com, d. yduan026@ucr.edu, e. XIAOYAN.ZHENG.2022@MUMAIL.IE

**corresponding author*

†These authors contributed equally to this work and should be considered co-first authors.

&These authors contributed equally to this work and should be considered co-third authors.

Abstract: The present study instantaneously aims at analyzing the themes that have cropped up in the Twitter posts about the Roe v. Wade leaked version and to explore the themes which have cropped up in sampled Twitter data of the leaked version. Data, in this present study, is based on a sample of Twitter tweets on the leaked Roe v. Wade ruling. It identifies themes and emotions within textual data by text mining, sentiment analysis, and topic modeling. These are then incorporated into the MDCOR system, thus making available a fully fledged toolset for large-scale textual data analysis. Results: The findings extract two main theme codes and their sentiment distribution, along with their high-frequency words. The results indicated that the most used keywords were "roevswade," "abortionrights," and "woman." Sentiment analysis shows negative, fear, and sadness as the dominant feelings. Therefore, this study provides a data foundation for investigating the themes emerging in Twitter posts regarding the Roe v. Wade leaked version, able to help enterprises or governments develop intervention strategies and understand public opinion.

Keywords: Roe v. Wade leaked version, twitter, Themes analysis, Immediate study.

1. Introduction

The United States Supreme Court decision in Roe v. Wade created a constitutionally protected right of a woman's choice to terminate a pregnancy within certain limits. Indeed, the ruling laid down a woman's right of choice to terminate pregnancy under certain conditions flowing from the constitutional right of privacy. The recent revelation of a draft version of the Roe v. Wade decision has refocused attention on the case and its implications, evidenced by conversations and debates across multiple platforms, not least social media. The newly leaked draft of Roe v. Wade, circulating on Twitter, garners a great deal of interest and evokes many questions related to its content and repercussions. Previous research has already been conducted on social media analytics and theme

identification within digital discourse. Extensive research has been done on different online forums, one of which is of specific interest to this paper, the Twitter forum. The literature indicates that some of these studies have used shallow methods of analyzing data and further captured the data in rather simplistic ways. An example is spelling in keywords; no wildcards were used to capture all the words, and cleaning up the data text was not done, thus adversely affecting the accuracy and utility of the results obtained from such analysis. The current research directly analyzes the themes that have so far freely flowed from the Roe V. Wade leaked version tweets. The objective is to highlight the themes that have emerged in the sampled Twitter data of the leaked version. It will also be assumed that, after data analysis, "roevswade", "women", and "abortionrights" will be the highest frequency words in the data. In contrast, public sentiments with high marks will be negative, like anger and disgust.

2. Literature Review

2.1. Introduction

The Supreme Court's decision to overturn Roe v. Wade immediately led to a large-scale public debate on social media platforms, especially Twitter. Several studies have used such corpus data from Twitter to study the sentiments of the general population, information diffusion, and the emerging topics of discussion about abortion authority. This literature review summarizes the critical articles analyzing Twitter conversations related to the reversal of Roe v. Wade, emphasizing methods, results, limitations, and implications for understanding public sentiment and social discourse.

2.2. Thematic and Sentiment Analysis

In the study, researchers investigate public sentiment about the reversal of Roe v. Wade on Twitter, analyzing geographical and sentiment trends. The authors have located and measured the frequency of terms such as "pro-life," "pro-choice," and "abortion" on Twitter. Therefore, using the Twitter API, data were collected, and sentiments could then be classified with a support vector machine, showing a remarkable turn towards negative sentiment in 2022 compared to 2021 [1]. What came out of the study was that social media showed changes in public sentiment and, in this case, specifically, the polarization of the debate between the "pro-life" and "pro-choice" camps. Moreover, some researchers examined a vast database comprising over 74 million tweets to scrutinize the discourse on abortion rights online immediately after the Supreme Court's decision. The targets of the study were trends in pro-choice hashtags and surges in Twitter engagement on essential dates: May 2nd and June 24th, 2022. Ultimately, the collected data shows that while Twitter is an excellent tool in understanding public opinion, the tweets might not represent the views of the large public because of the demographic biases associated with it [2]. In further attempts, researchers investigate the sentiments and emotional conditions of the reversal of Roe v. Wade using techniques from natural language processing. At the leak of the decision by Politico, they noticed that positive sentiments were extremely high and started to trend neutral and negative as the official decision was announced [3]. This research brings out the dynamic nature of public sentiment and the importance of understanding the linguistic components of tweets to capture complexity in public opinion.

2.3. Social Network and Semantic Analysis

In a study, social network and semantic analysis were applied to provide more insight into the role of the main influencers and themes within the public conversation surrounding the reversal of the decision reached in Roe v. Wade. This was done using NodeXL Pro and software for semantic network analysis to highlight the central influencers and topics. The top influencers, including noted

journalists, news organizations, and activist groups, played a significant role in shaping the discourse. Their influence was evident in the predominant themes of legal consequences, skirmishes on reproductive rights, and an anti-Supreme Court narrative [4]. Importantly, the study also pinpointed that the discourse was of an extremely polarized nature in and around different subgroups with different hashtags, such as #bansoffourbodies and #Roe v. Wade. Another research focused on the responses of reproductive rights organizations on Twitter following the Roe v. Wade reversal. The study identified five central themes—resilience, calls to action, intersectionality of identity, educational content, and identity oppression—that were prevalent in the tweets from organizations like Planned Parenthood and the National Organization for Women (NOW) [5]. The research underscored the importance of social media in rallying support and disseminating information in the fight for reproductive justice, particularly in the context of marginalized communities.

2.4. Racial and Ethnic Disparities

Several researchers similarly elaborated on how race, ethnicity, and abortion rights were inextricably linked within the context of the Roe v. Wade reversal. More specifically, they provided evidence of racial resentment and socio-economic disadvantage expressed on Twitter, where 0.7% of tweets included explicit mentions of race and ethnicity [1,2]. The findings suggest that concerns over racial disparities in abortion access are very real components of the public discourse, warranting continued surveillance and research in the area.

2.5. Limitations and Future Research

Almost all the studies inspected know that Twitter data is not an ideal source for public opinion; they note demographic biases but also mention the non-representativeness of Twitter users and the exclusion of tweets in languages other than English. Furthermore, these studies often report on specific periods and may not be able to display the full extent of public sentiment and discourses over time. The literature reviewed evidence that Twitter will play a key role in shaping and reflecting public discourse surrounding the reversal of Roe v. Wade. These studies achieve this by their theme, sentiment, and social network analyses, trying to give nuanced insight into the reaction of the public to the judgment by the Supreme Court. These findings underscore the polarized nature of the public debate and the intersectionality considerations necessary for more comprehensive research into what public opinion has meant in the post-Roe era.

3. Methodology

This study utilizes data in the examination and analysis of Twitter tweets related to the leaking of Roe v. Wade ruling. The research involves the exploration of text data by text mining, sentiment analysis, and topical modeling in the pursuit of the discovery of themes and feelings. Such are methods set up in the Machine Driven Classification of Open-ended Responses, MDCOR system, to enable a completely featured toolset in huge textual data.

3.1. Data Collection

In Figure 1, this study initially gathered a huge number of most recent Twitter posts about the leaked sentiment regarding the Roe v. Wade decision. Using a data mining tool, scraping was conducted on relevant tweets by setting the keywords and hashtags, which generated 5,000 open-ended responses. We first create a DocumentTermMatrix that consists of documents that amount to 4997 and 880 unique terms. The DTM enabled counting the frequency of terms within the dataset. We imposed a sparsity of 99%, and a maximal term size of 28 characters. Customary text cleaning steps were

planned, including removal of stop words, punctuation, and other unwanted characters. This was done to ensure data were valid and meaningful.



Figure 1: Text Mining and Word Frequency.

3.2. Text Mining and Word Frequency Analysis

After these cleaning processes from figure 1, text mining was used to ascertain the frequency of each of these words in the data set. This was done using a DocumentTermMatrix, where the results showed how often each individual word came out in the papers. Further cleaning was done to remove common words and strange characters. The DTM brought out 875 unique terms. The researchers found some words that users used the most in the text, such as "roevswade," "abortionrights," "scotus," and "mybodymychoice." They denote the key themes that appeared while discussing this hidden decision on Twitter and are mostly related to women's rights, legal issues, and personal freedom. Through the identification of such keywords from a word frequency overview, we could have a feel of the central discussion topics in the information. Apart from enabling one to view the hot topics, the DTM allowed more significant statistical studies, such as sentiment analysis and topic modeling, due to the structuring of the written information.

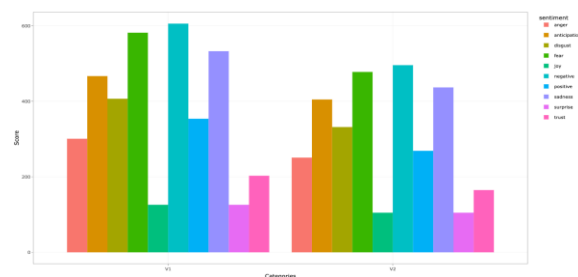


Figure 2: Sentiment bar chart.

3.3. Sentiment Analysis

According to figure 2, the study applied the method of sentiment analysis, categorizing text into predetermined emotional reactions, to draw a clearer picture of what people were feeling through their expressions of conversation with Twitter. The sentiment analysis of tweets was categorized into different groupings of emotions, such as anger, excitement, disgust, fear, joy, sadness, surprise, trust, and yet others, for a more general response, negative and positive. The sentiment analysis results were bar charted with groups "V1" and "V2" on the X-axis and sentiment scores on the Y-axis. It displayed quite clearly how opinion was spread across different groups of data. For instance, high scores for "anger" and "fear" indicated how strong the emotional reaction to the leaked verdict was, signaling what concern and dissatisfaction the public elicited. The difference between "V1" and "V2" made it possible adequately to compare how different groups felt so that one could see how people from different groups might respond to the same problem in quite different ways. This analysis added to the information been obtained from the text mining regarding the themes, therefore, presenting a more detailed presentation of how individuals really felt and, as such, a more complete analysis.

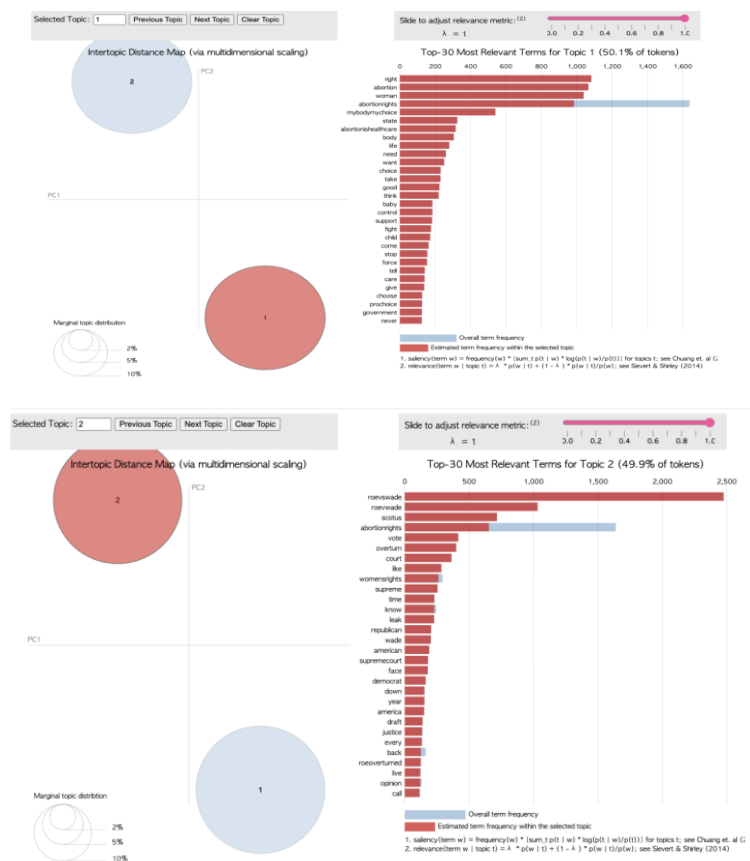


Figure 3: Topic Modeling.

3.4. Topic Modeling Analysis

Subsequently, according to figure 3, this study used the traditional topic modeling approach called Latent Dirichlet Allocation (LDA), to trace any latent themes in the dataset following the sentiment analysis. It could find various topics by looking at the frequency of word co-occurrence in a tweet. The MDCOR measures were then able to determine that the optimal number of topics was two, as identified by the best fit of a two-topic model. The way topics two and one are related is as displayed,

via the map of intertopic distance, below, constructed by the LDA model. It also displayed the top 30 most prominent terms under each topic, making it easy to recognize the major ideas within each subject. The first issue was mostly about "abortion rights," "woman," "choice," and "mybodymychoice," proving the concern for women's safety and control of the body. The second topic, on the other hand, was more oriented toward the legal and political perspectives of the issue. Some of the key words therein included "roevswade," "scotus," "overturn," and "supremecourt." In putting the study to use, the analysis went a step further from simple analysis of word frequency into the ability to draw out the depths of the topic patterns hidden in the data. Naming and drawing these topics helped us draw understanding to the various parts of the conversation by elaborating topics that spanned from personal rights to law issues.

3.5. Tools and Software

The analysis was performed using MDCOR, a specialized software for the classification of open-ended responses. In this environment, all the facilities for working with large textual data, text mining, analyzing word frequency, sentiment, and LDA topic modeling were conducted. The study adopted in this work effectively uses the most advantageous attributes of MDCOR for data classification, LDA for topic modeling, and sentiment analysis to identify the primary notions and affective coloration in the Twitter discourse pertaining to the leaked Roe v. Wade ruling. Through this holistic mixture of methods, the study thus unveils a very precise and systematic analysis of complex textual information to give much insight into the primary stories, issues, and feelings expressed by the respondents.

3.6. Data Analysis of Sentiment Themes from Twitter Posts Related to Roe v. Wade

The data analysis focused on examining sentiments expressed in the Twitter posts. Relating to the Roe v Wade argument, under two variables, V1 and V2 in figure 2. The sentiments have been considered on ten categories: Anger, Anticipation, Disgust, Fear, Joy, Negative, Positive, Sadness, Surprise, and Trust. Each of these categories was scored independent of the other based on the emotional content of the tweets. The results have been represented in a bar chart.

3.7. Analysis of V1 Sentiments

Back to figure 2, the strongly advocating women's rights vs. highly condemned male-dominated power structures are themes that gathered importance and could be seen in the V1 statistics from words such as "right," "abortion," and "woman." In addition, themes such as women's liberty and gender roles were strongly supported. Their tweets reflected feelings of outrage and anticipation. High scores of these feelings relay to the further note that the debate in this matter is very contentious, and much more of the tweets are belittling or criticizing men. People are outraged by what they see as such a surplus of authority is indicative of a much larger criticism of female injustice. Many tweets tied feminist ideals to political activism, especially in support of the Democratic Party, using hashtags like #VoteBlue. This meant that the fight for Roe v. Wade was not really about abortion rights alone but about the very important political problem the other courts had enumerated: linking gender rights to how to win elections. V1 even was sardonic and playful to other groups, fighting for the rights of minorities: for example, sardonic tweets concerning transgender rights in cases of abortion. Being sardonic, the authors used the tool to show more significant issues in a populist way. In this case, with such an intermingling identity, social problems are spoken over simultaneously, and many problems exist in public speech.

3.8. Analysis of V2 Feelings

In Figure 2, based on the V2 data, reveals a significant shift towards political discourse. The prevalence of keywords like 'Roe vs. Wade,' 'SCOTUS,' and 'vote' indicates a heightened concern about the role of the Supreme Court and its potential impact on future elections. The V2 feelings are a mix of excitement and fear, reflecting the public's apprehension about the implications of the court's decision and their eagerness to engage in politics. Political action is evident in V2. Half the tweets include lots of requests for people either to vote or do something, so maybe the result of a changed one might be the election results. It speaks volumes about how important the issue of Roe v. Wade is. People using terms such as #TrumpTrain and #VoteTrump2024 show that the problem is being inducted in national politics. Another notable aspect of V2 is the prevalence of political humor, particularly in sections discussing public figures like Elon Musk. These tweets, often employing sarcasm and wit, serve to either support or critique the political views of the figure in question. They demonstrate how even influential individuals can shape public discourse on important issues. This use of satire, often intertwined with political commentary, serves to simplify complex issues and make them more engaging. Aside from that, the V2 data carried important subjective signs about religion. Most of these tweets expressed anger and an annoyed perspective through religious remarks, mainly by attacking Evangelical views on abortion. Some challenge anti-abortion views using a few religious words to show how the religious reasons are not always true. In another way, this religious language adds another emotional level to the argument, showing how deeply personal and belief-based abortion debates can be.

3.9. Final Thoughts

A study of the feelings people had when they wrote about Roe v. Wade on Twitter reveals a complex emotional landscape. In V1, most topics were on gender roles and women's rights. The topics were quite often related to political involvement and strong feelings, namely anger and anticipation of the ruling. V2 has a lot more political speech in respect of fear, anticipation, and even humor. These different feelings and ideas show how divided people are and how important the Roe v. Wade case is. The study shows how important it is to understand the emotional and theme aspects of social media conversations, especially when they are around critical and controversial topics.

4. Discussion

This study successfully archives the primary aim of studying the themes that emerged in the sampled Twitter data around the case of the leaked Roe v Wade reversal draft. It extracts two principal theme codes, their sentiment distribution, and their high-frequency words. Unlike the hypothesis, sentiment analysis shows that disgust and anger have a relatively low sentiment score and ratio, separately at rank 5 and 7 among the list of ten sentiments. Furthermore, in the previous assumption, the words "roevswade", "abortionrights" and "women" are conjectured as the words have the overall highest frequency. While "roevswade" and "abortionrights" are ensured as the top two most frequently used words, the word "women" has a lower frequency than the assumption, at the fifth place of the frequent word list. Contrary to the hypothesis, the word "right" is shown as the third most frequent word.

Using MDCOR's advantage in classifying potential contextual themes of the open text, two theme codes are extracted: women's rights and political appeal, separately containing the nuanced context of religious belief and the celebrity effect. This differentiation phenomenon reflects the immediate reaction and the focus point on the incident of Twitter users, revealing they mainly interpreted the incident on women's rights and the two-party campaign of the US. Similar focus preferences are also reflected in other sentiment studies around the Twitter user's reaction to the Roe v Wade leak incident, which all revealed a high frequency of words or topics highly related to women's rights and political

affiliation discussion [1,6]. As studied, the overturn of Roe v Wade breaks the previous uniform abortion standard in the US, and the decrease in systemic legal support will cause many people, especially women, to suffer [7]. The findings of this study also can support this viewpoint of incidents' specific negative implications on women's rights, as 3/5 of the representative texts from the women's rights topic expressed aggressive opinions of feeling unfair that women have fewer rights than men. Furthermore, the individual sentiment analysis of the two topics also reflected that the topic related to women's rights shows a more intense sentiment score than the topic of political appeal. Overall, findings proved one of the targeted negative impacts made by the incident from the perspective of immediate reaction, including stimulating the theme of gender antagonism as the Roe v Wade leak incident would probably be interpreted as a threat to women's rights by the audiences.

Meanwhile, the influenced political affiliation and the form of political appeal raised in the text data will also be reflected. As revealed in the survey [8], people's knowledge of Roe v Wade is also affected by political affiliation, such as the Democrats showing a preference on the sentiment of supporting abortion. This relevance also appeared in the theme topic of political appeal that emerged in this study, as the representative texts from both topics connect the voting democratic elector to supporting abortion rights and suppose the republic as the opposite. As one of the sample tweets that filtered for defined theme topics also shows the presupposition of the democratic party as abortion rights activists in the sentiment analysis, there exists a specific, nuanced phenomenon that the two political parties in the US have generally been tied to two polarizing positions on abortion right in the atmosphere of social media discussion of the relevant incident [6]. In addition, the nuanced theme of online celebrities' powerful influence on the discussion of Roe v Wade also emerged in the representative text on the topic of political appeal, as this teasing post related to Elon Musk and his position of supporting the Republican Party, which is supportive to the [4] 's social network analysis of discovering celebrities' significant influence on the discussion of social events. On the other hand, the sentiment analysis findings of this study are different from a study using the same data type and contain a more specific range of exploring the immediate theme that emerged in public voice on Twitter compared with other studies using data from later periods. That sentiment analysis shows that the majority of sentiment is a positive emotion, and anger and optimism have the highest ratio, followed by joy (17%) and sadness (12%) [3]. However, this study finds that sentiment analysis shows a unique result from [3], reflected as a negative emotion, which is the major part of the sentiment constitution. Fear and sadness have the second and third highest percentages after negative. Anger's sentiment score is listed as sixth overall among the ten sentiments. This difference is probably because this study and Pinto's study use different methodologies for data sampling and analysis, and they apply different data sizes and specific open-text data. Therefore, this study is helpful to enrich the research information on related topics and provide a new analytical perspective.

4.1. Implications

In conclusion, this study confirmed the following phenomenon: 1) Public voice has a tendency to pay prior attention to women's rights and political affiliation, and the former may contain more intense emotions; 2) Roe v Wade also has a specific adverse effect on evoking negative emotions related to women; 3) When people discuss the connection between abortion rights and political positions, there may be a common assumption that the availability of abortion rights corresponds to the two political parties in the US. From an enterprise perspective, particularly in the context of public opinion management on social media, this study can facilitate the development of effective intervention strategies for shaping public opinion and influencing discussion dynamics. Additionally, it can assist social media companies in formulating appropriate management plans when a serious public accident happens. From the government's perspective, this study corroborates the deleterious effects of significant health accidents and the potential bias in public voice. This insight can assist the

government in realizing crises and interpreting the nuances of public opinion on political matters more accurately. The phenomenon of biased associations revealed in this study may also help to remind the public to participate more critically in the discussion of public events. Finally, from the social analysis perspective, this study provided a focus theme analysis on the immediate day of the Roe v Wade leak, which is helpful in reviewing this social time more comprehensively.

4.2. Limitation

However, this study is also limited in the data source, as the data is all collected from Twitter. Thus, the findings may not be present in explaining potential themes in a wider social range. In future studies, it would be beneficial to consider setting additional non-Twitter platforms as data sources. In addition, as only data published on the day of the leak is collected, some more immediate responses may have been missed because of time zone differences and other timing factors. In later studies, the findings of this study can be combined with other studies that have conducted longer data collection periods. These results are also possible to be limited to the quantity of input data, as the analysis software can only analyze 5,000 pieces of textual data at one time. Further technological development is needed.

5. Conclusion

The study aimed to explore Twitter users' emotions when the Roe v. Wade decision was leaked. Also, figure out the meaning behind those emotions. The study hypothesized that "anger" and "disgust" would be the two most used emotions. For the keywords, "roevswade," "abortionrights," and "women" would be the three most frequently used words in those posts. However, after analyzing the data, the study found that although negative emotions appeared in most tweets, "anger" and "disgust" only ranked fifth and seventh out of 10 emotions, respectively, rather than the assumed first and second. In addition, the study confirmed that "roevswade" and "abortionrights" were the two most frequent keywords in the tweets, which is consistent with the study's hypothesis. However, the word "female" was only fifth in frequency, not in the hypothetical top three. This result suggests that although women's rights were the main point of the decision, the public was more likely to discuss the policy and its political implications directly.

The findings of this study show that the news of the leaked Roe v. Wade decision caused widespread concern and strong reactions from the public. People commonly believe that women's autonomy is being violated, and their control over their bodies is being threatened, and it inspires strong negative emotions. However, the study also revealed that supporting abortion rights or not in tweets is often closely related to the user's political stance. Many Twitter users associate arguments against women having the right to have their own abortions with Republican supporters, while arguments in support of women having the right to have their own abortions are more often tied to Democratic supporters. This phenomenon demonstrates that: in the American political environment, the issue of abortion rights has become more than a moral or legal issue; it has become a focal point of political disagreement. This study provides valuable data for future scholars studying the Roe v. Wade verdict leak, especially in terms of sentiment analysis and social media opinion. At the same time, this study also provides a perspective for governments and policymakers to understand public sentiments and perceptions to help them better cope with society's responses and formulate more effective intervention policies and strategies. These findings not only reveal the complexity of the public's emotional responses in the face of major social events but also emphasize the importance of political stance in public discourse, which is important for understanding contemporary American society's political and social dynamics.

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References

- [1] Mane, H., Yue, X., Yu, W., Doig, A. C., Wei, H., Delcid, N., Harris, A.-G., Nguyen, T. T. and Nguyen, Q. C. (2022) 'Examination of the Public's Reaction on Twitter to the Over-Turning of Roe v Wade and Abortion Bans', *Healthcare*, 10(12), pp. 2390. Available at: <https://www.mdpi.com/2227-9032/10/12/2390>.
- [2] Rao, A., Rong-Ching Chang, Qiankun Zhong, Wojcieszak, M., & Lerman, K. (2023). #RoeOverturned: Twitter Dataset on the Abortion Rights Controversy [Data set]. Harvard Dataverse. <https://doi.org/10.7910/DVN/STU0J5>
- [3] Pinto, G. (2023) *Analyzing the Overturning of Roe vs Wade on Twitter Using Natural Language Processing Techniques*. M.S., Chapman University, United States -- California [Online] Available at: <https://liverpool.idm.oclc.org/login?url=https://www.proquest.com/dissertations-theses/analyzing-overturning-ro-v-wade-on-twitter/docview/2813501983/se->
- [4] Dai, Z., & Higgs, C. (2023). Social Network and Semantic Analysis of Roe v. Wade's Reversal on Twitter. *Social Science Computer Review*, 42(1), 186–200. <https://doi.org/10.1177/08944393231178602>
- [5] Heaton, K. (2023). BANS OFF MY BODY: ABORTION RIGHTS MOVEMENT ON TWITTER FOLLOWING THE OVERRULING OF ROE V. WADE. <https://doi.org/10.5281/ZENODO.7851369>
- [6] Ujah, O. I., Olaore, P., Nnorom, O. C., Ogbu, C. E., & Kirby, R. S. (2023). Examining ethno-racial attitudes of the public in Twitter discourses related to the United States Supreme Court Dobbs vs. Jackson Women's Health Organization ruling: A machine learning approach. *Frontiers in Global Women's Health*, 4: 1-14. DOI: 10.3389/fgwh.2023.1149441.
- [7] Lewandowska, M. (2022) 'The fall of Roe v Wade: the fight for abortion rights is universal', *BMJ*, 377, pp. o1608. DOI: 10.1136/bmj.o1608.
- [8] Crawford, B. L., Jozkowski, K. N., Turner, R. C. and Lo, W.-J. (2022) 'Examining the Relationship Between Roe v. Wade Knowledge and Sentiment Across Political Party and Abortion Identity', *Sexuality Research and Social Policy*, 19(3), pp. 837-848. DOI: 10.1007/s13178-021-00597-4.