Terrorism-Related Topic In The Language Of Fake News In Indonesia

Ahmet Yiğitalp Tulga
Human and Economic Geography, Ankara University, Turkey
E-mail: ahmettulga@hotmail.com
Tonny Dian Effendi
Department of International Relations, University of Muhammadiyah Malang, Indonesia
PhD student, Institute of Political Science, National Sun Yat-Sen University, Taiwan
Email: tonny@umm.ac.id

Abstract

The discussion on the relations between terrorism and social media mainly focuses on social media's role in spreading terrorism ideology and recruiting a member of the terrorist group. However, social media has also become means to share fake news related to terrorism. Considering the relationship between fake news and terrorism, the primary purpose of this study is to examine the content, language used, and emotion of fake news about terrorism in Indonesia. It also revelas what kind of language is used in fake news to manipulate the public and what emotions it appeals to? We analyzed fake news about terrorism in Indonesia using quantitative text analysis methods, such as sentiment analysis and dictionary-based analysis methods with R statistical software. We created two dictionaries covering religious and violent words, and fake news was examined under these two dictionaries. For reliability, we applied the "Split-half test" to the results and we reached similar results. This study shows that ISIS, Aceh, and terrorist action in Sulawesi are three dominant topics in fake news. Second, the language on fake news is mostly about terrorism and violence to create fear in society. Third, violence and religious language are equal in the language of misleading content. We interpreted the results obtained with the traditional fear of crime theory. We then discussed the significant results of this research and made effort to explain the reasons behind our research results. The study has a limitation because of the small number of fake news. Future studies may overcome this limitation by selecting multiple countries as cases or increasing the data range of fake news. The dictionary-based method we used in this study is relatively new to the literature and provides the opportunity to analyze fake news content effectively. Our results using the Dictionary-based method can provide valuable clues for policymakers in the counter-terrorism field.

Keywords: *terrorism, fake news, language, content, Indonesia, fear of crime*

Abstrak

Diskusi hubungan terorisme dan media sosial sebagian besar berfokus kepada peran media sosial dalam menyebarkan ideologi terorisme dan perekrutan anggota kelompok teroris. Namun, media sosial juga menjadi sarana untuk menyebarkan fakenews terkait terorisme. Penelitian ini bertujuan untuk menyelidiki konten, bahasa dan emosi dalam fakenews-terkait terorisme di Indonesia. Kami berfokus kepada pertanyaan bahasa apa yang digunakan untuk memanipulasi emosi publik? Kami menganalisis fakenews terkait terorisme di Indonesia menggunakan analisis teks kuantitatif, seperti analisis sentimen dan dictionary-based analysis dengan menggunakan program R. Kami membuat dua kamus menyangkut kata religius dan kekerasan, dan fakenews diteliti berdasarkan dua kamus ini. Untuk uji realibilitas, kamu menggunakan "Split-half test" kepada hasil analisis. Studi ini menunjukkan bahwa ISI, Aceh dan aksi terorisme di Sulawesi menjadi tiga topik dominan dalam fakenews. Kedua, bahasa fake news sebagian besar tentang terorisme dan kekerasan diciptakan untuk menakut-takuti masyarakat. Ketiga, kekerasan dan

bahasa religius muncul bersama dalam konten yang menyesatkan dalam fake news. Kami menginterpretasikan hasil ini dengan teori traditional fear of crime. Kemudian kami mendiskusikan hasil akhir dan menjelaskan alasan dibalik hasil tersebut. Penelitian ini memiliki keterbatasan karena sedikitnya jumlah fakenews. Penelitian di masa mendatang mungkin dalam mengatasi keterbasan ini dengan melakukan perbandingan dari beberapa negara untuk meningkatkan jumlah fake news yang diteliti. Metode berbasis kamus ini relatif baru dalam literatur dan memberikan kesempata untuk menganalisa konten fake news secara efektif. Hasil dari penelitian dengan metode ini dapat menunjukkan petunjuk yang penting dalam usaha penanggulangan terorisme.

Kata Kunci: terrorisme, fake news, bahasa, konten, Indonesia, fear of crime

Introduction

The discussion of the terrorism-related topic as fake news content is limited. Most studies in the relations between terrorism and social media mainly focus on social media as a tool to spread the terrorism ideology and propaganda (Cvetijevicm, and Hochmair, 2018), provide the space for terrorist groups to recruit their member (Ahmad., et al, 2019; Awan, 2017), and create collective behavior (Fischer-Prebler, Schwemmer, and Fiscbacj, 2019). An increasing number of fake news also touches the terrorism content. Although it may not directly relate to terrorist activities or groups, when the fake news manipulates the news to encourage people's attention and sympathy, it may cause danger to society. This article attempts to examine the relations between terrorism and fake news by finding the language used in the terrorism-related content in fake news.

According to Weinberg (Paul, 2010), terrorism's goal is to scare people. Terrorists frequently seek to generate a broad sense of worry and fear among the population. Fake news plays an essential role in creating an atmosphere of fear in public. Especially with the development of social media platforms, fake news about terrorism spread rapidly worldwide in a brief time. One of the crucial examples of this situation is the fake news that spread during the Las Vegas shooting in 2017. Before the official announcement by the authorities, there was a dramatic increase in fake news and false claims about the attack. The Las Vegas massacre exemplified a troubling trend of fake news makers using tragedies to promote false information to further their own goals. Inducing high-arousal emotional states in their readers, such as wrath or terror, is a frequent strategy employed by false news producers to get the public's attention (Weinberg, 2005). Producing fake news that elicits fear or fury might cause individuals to change their minds about particular policies (Sustein, 2014) and promote content sharing (Fischhoff., et al, 2003). As a result, the public's heightened emotions may cause extensive dissemination of fake news and further societal polarization following a terrorist act (Berger, 2011). It is critical to examine the fake news' content to understand the dynamics behind this tactic.

Indonesia, which suffered from a terrorist attack in early 2000, now faces another challenge—fake news. In 2002, Incidents in Indonesia related to terrorism alone are responsible for nearly a third of global deaths (Chen 2019). However, fake news also became a threat to Indonesian society (Oktaviansyah and Rahman, 2019). The fake news in domestic politics in

Indonesia creates polarization in the society, and in several cases, it creates conflict (Duille and Tamma, 2021; Mahestu and Sumbogo, 2020). In this direction, this study examines the fake news about terrorism in Indonesia through quantitative dictionary-based analysis and sentiment analysis. We interpret the results of the study with based on fear of crime theory.

This study attempts to explain the link between information and terrorism, particularly the fake news on terrorism that is disseminated and circulated to Indonesian society. The study on fake news as one kind of information on terrorism has several significances. First, on the one hand, terrorism remains an issue in Indonesia, and on the other hand, Indonesians like to use social media, or in other words, Indonesians who consume information through social media are increasing dramatically. According to the Datareportal report on February 1, 2017, 106 million of 262 million Indonesians are active social media users (Datareportal, 2017). This report shows that 51% of Indonesian people are using social media actively. In 2019, the number of Indonesians active in social media increased 15% or 20 million from 2018 (Datareportal, 2019). The remaining issue on terrorism and the dramatically increasing number of active social media users in Indonesia may be linked both in how the terrorist organization gets the members and the way to spread information about terrorism, including the fake news. Second, although the terrorist attacks were relatively decreasing compared to the first decade after the political reform in 1998, our study shows that fake news also exists. In this context, fake news about terrorism can be used to analyze the topics related to terrorism. Third, when terrorism goals are to make people scared, the fake news in a certain degree or situation also makes people scared, or at least anxious. In this context, the fake news may be part of terrorism itself in circumstances situation.

This study analyzes the fake news on terrorism in Indonesia in six parts. The first is the explanation about fake news. The second part is research design, while the third part is the result of our study. The fourth part is the discussion, and we conclude our research with the conclusion.

Literature Review

Terrorism and fake news are not recent issues. Both may bring fear and problem to society. Therefore, when terrorism and fake news become a single issue, society faces a complex challenge. Terrorists may use fake news to create fear, and on the

other hand, the fake news may spread the terrorism-related topic to its content. On the latter, social media provides the means to spread fake news related to terrorism. The terrorist and criminal groups do not only share their terrorism or violence activities to reach broader impact while deepening group cohesion, but also share the fake news. The fake news related to war and terrorism spread faster on social media and made people discuss the topic longer (Carchiolo., et al, 2018). In the dissemination of information related to terrorism, there is an echo chamber, where people share the same opinion and interest by discussing the specific topic in social media (Kostakos., et al, 2018). In the Manchester and Las Vegas shooting cases, Paos et al. find that fake news dominates the information before and after attack with the same trend as the actual news. While in Sweden, for terrorist attack news, the real and fake news spread consciously in the information and affect the public opinion and management of crisis (Innes, Daviews, and Lowe, 2019). Therefore, the role of the government to counter terrorism-related fake news and the way to deal in the post terrorism event are critical to save society from fake news, including the conspiracy theories (Thielen., et al, 2019).

Fake news is considered an essential issue by scholars who underline its destabilizing effect on societies. Fake news refers to false, misleading, improperly attributed, or utterly fabricated information presented as accurate information (Chen, 2019). Some studies in current literature also find that fake news maybe used for political goal by weaponized it as a discursive tool (Neo, 2020). The current literature highlights two critical points regarding fake news. First, the fame that fake news is a security issues that threaten social values. Second, fake news is used to facilitate unfounded 'false press' accusations against media outlets (Joghson, 2018). Today, computer and mobile phone technologies are advanced, which have changed people's habits. In addition, fake news poses a significant problem when trust in the media and government is at an all-time low and paranoia increases the conspiracy theory discourse in such a political climate (Goldberg, 2016). On many issues and against certain groups, the current paranoia legitimizes people's posting of fake news on social media platforms such as Twitter and Facebook (Chun, 2006), which instrumentalizes the threat against the press and the public and causes negative changes in the psychology and behavior of the society.

Inducing high-arousal emotional states in their readers, such as wrath or terror, is a frequent strategy employed by false news writers to get attention. Fake newsmakers can persuade people to accept their tales by using events like wars and terror attacks, which frequently result in substantial negative sentiments (Khaldariva and Pantti, 2016) and high arousal emotional states like dread (Fessler, Pisor and Navarrete, 2014). Fake news that elicits fear or fury might cause individuals to change their minds about particular policies (Lerner., et al, 2003). As a result, people's heightened emotions may cause extensive dissemination of fake news and further societal polarization following a terrorist attack.

In Indonesia, when the government struggles with counter-terrorism, increasing social media users and spreading fake news make situations more complicated. Social politics, ethnic-race groups, religion, governance, and health became the main topics of fake news in Indonesia (Mastel Indonesia, 2019). Ideological reasons are some of the goals of spreading this fake news (Rasidin., et al, 2020). Fake news aims to construct public opinion to support a specific ideology.

In terms of history, fake news is not a new phenomenon. Since the Roman era, fake news was created to disseminate false information accidentally (Posetti and Matter, 2018). This kind of information may potentially endanger the community since it contains incredible and inaccurate information (Freelon and Wells, 2020). It may be created for economic purposes (Vasu., et al, 2018) or politics (Li, 2020) by constructing the wrong belief, judgment, and evaluation. The main goal of fake news is behavior change in society. The mis- or disinformation in fake news then spreads quickly and reaches the wider society and the development of the advanced information technology. Social media is one of the means that affect the reach and speed of fake news. From Roman until the social media era, fake news is like the old wine in the new bottle (McDougall, 2019). It means that the fake news is exist from long time ago, but the way it is shared, and spread is influenced by the revolution of technology of information.

Some scholars also call fake news junk news. Junk news is the false information that freely circulates in a community, and they accept it as the correct information (Bradshar., et al, 2019). Junk news mainly spreads by using social media. The junk news' creator uses the flawed social media algorithm to fool the audience's logic, cognition, and emotion. As a result, when people read the junk news, they do not

criticize and check it. Instead, they trust information that appears convincing on social media.

Social media has become more accessible and necessary means to spread fake news. Fake news uses the space and environment that social media may provide (Simmermann and Kohring, 2020). Often, the fake news creator uses social bots in social media to increase the speed and coverage of the fake news (Lazer., et al, 2018). These social bots are manipulating people's behavior in social media networks. Political communication also includes the area where the social bots work (Keller and Kliner, 2018). The most dangerous of these social bots' effects is that people unconsciously interact with them, so people can be persuaded and influenced by the information they share.

In the Indonesian case, a non-profit organization, *Masyarakat Anti Fitnah Indonesia* (MAFINDO), categorizes mis- and disinformation into seven categories (Adnan, 2019). They are satire or parody, misleading content, imposter content, fabricated content, false connection, false context, and manipulated content. Satire and parody are some examples of these categories. The misinformation may not be intended to create cost for particular individual or groups, but it may be damaging when people accept it as truth.

Furthermore, the information may be consciously intended for a specific purpose, like framing the issue and damaging the targeted individual or groups. Creating this kind of information may be by connecting two unrelated information, misusing the context, or manipulating information content. Fake news is about the information that may be collected incorrectly—following the norm and proper editorial process—and so, it creates uncredible, incorrect, inaccurate, and deceptive news (Lazer., et al, 2018).

Currently, in the social media era in Indonesia, many mis- or disinformation contents are spreading through social media. The actor behind this information may have several purposes like fooling the audience, creating anxiety in society, and for specific ideological purposes. For this last purpose, the creators may combine social, politic, and economic issues with religion. Terrorism action in Indonesia has also shifted from targeting the American and Western's symbol to the worship place and the government (like the police office). The purposes have also shifted from anti-America to anti-government and the desire to establish an Islamic state in Indonesia. Although there are some shifts, the issue is relatively remaining same, the religion issue.

This study discusses the space between terrorism and fake news in Indonesia. When the previous studies have focused on the fake news in the specific terrorism attack, this study is not limited to the specific attack, but also covering the peaceful situation. Moreover, this study analyses the languages that are used in terrorism-related fake news content. These languages are critical to understand how fake news creators connect terrorism and other issues to manipulate and encourage public emotions. Moreover, the study shows how terrorism-related information in the fake news is shifting from anti-America to other issues.

Research methods

We first started our study by finding fake news in Indonesia on terrorism. In this context, *Masyarakat Anti-Fitnah Indonesia* or MAFINDO offers an important insight regarding fake news in many fields. The turnbackhoax.id that is managed by MAFINDO shared the contents and their responses of fake news about terrorism in Indonesia. We have 59 fake news between 2015-2021 and all of these news stories are in Indonesian. After that, the analysis process of fake news started.

Firstly, we clean the 59 fake news by the R computer program. During the cleaning, the program eliminates the words and symbols that less affecting to the meaning. This data cleaning is the critical step in the text mining. Finally, we delete the "stop words" or the terms with little effect on the semantic sense.

The second step is tokenization. In this step, we split a text into tokens, This step is critical for computational text analysis since any meaningful computation is too specific in the full text.. Most often, tokens are words because these are the most common semantically meaningful components of texts (Welbers, Van Atteveldt, and Benoit, 2017). After this process, the most used words were found among our text data, and in parallel with this process, "wordcloud" chart were created with NVIVO software.

In the next step, we made a topic analysis of the selected news. In order to concentrate more precisely on issues within the inaugural address and expand the number of texts to be modeled, we first divided the texts by paragraph and created a new Term-Document Matrix (Guo., et al, 2016). From this Term-Document Matrix (TDM), we deleted words with a document frequency of five and below to minimize the vocabulary size and used the quantum conversion feature to transform the TDM into the form used by the topic models (Grün, and Hornik, 2011). We performed a

variety of concept specifications and calculated the essence of each subject in each model by reading the word stems and manifestos with the highest likelihood of belonging to each subject. We found that gathering the news into three general topics gave the most robust result. For these reasons, we divided the news investigated into three topics. The results revealed that news is focused on ISIS, separatism in Aceh, and terrorism in Sulawesi.

In the following step, we conducted a sentiment analysis of the news. We used some basic packages for sentiment analysis in the R computer program. However, these simple packages sometimes gave incorrect results because of false-positive or double negative statements. Therefore, researchers can create a way to overcome these issues or use several R-packages created to avoid this situation. One package created for this purpose is the "sentiment" package, which we used in this study.

We prepared two dictionaries for "terrorism" and "religious" in the last step, and dictionary-based analysis is performed. Due to the difficulty of coding manually, we used dictionary-based analysis to automatically classify "terrorism" and "religious" discourse in the press. We have also developed a much more manageable "terrorism" and "religious" metric based on computer-driven content analysis, as a classical content analysis is a time-consuming and potentially expensive undertaking.

This metric is based on the dictionary system, where the proportion of words that we deem to be "terrorism" and "religious" markers is determined by the "quanteda" package in R. This implies that words are the measuring norm, rather than paragraphs (Roodiijn and Pauwels, 2011). The choice of words from this analysis for the dictionary is based both on analytical and theoretical logic (Bonikowski and Gidron, 2015).

This procedure searches the records for a given series of words and provides a prevalence score for each record for each word (Molek-Kozakowska and Wolk, 2021). Since this study is related to terrorism and identity issues, we first manually created a list or "dictionary" that includes words related to terrorism and identity. We used Cambridge and Merriam-Webster dictionaries to create these dictionaries. In addition, as Bonikowski and Gidron (2015) suggested in the preparation of dictionaries, we read extensive literature related to identity and terrorism and identified potentially relevant terms. In this context, two dictionaries cover the identities "terrorism"

and "religious." We cleaned these two dictionaries of terms that generated an overwhelming number of false positives. All words in dictionaries are unigrams. Both dictionaries are English. "Terrorism" dictionary covers words such as 'attack', 'bomb', 'killing', 'crusader', 'defeat', 'terrorist', 'disbeliever', and 'the devil'. "Religion" dictionary includes 'ayah', 'believer', 'brother', 'moral', 'caliphate', 'baqarah', 'dunya', and 'fatawa'. "Terrorism" dictionary contains 401 words, "religion" dictionary contains 401 words. After creating these two dictionaries, then we ran the analysis based on those terms.

In the next step, we divided fake news into three categories: false content, disinformation, and misleading content. Misleading content contains misinformation and manipulated content. The dictionary-based analysis is repeated for these three groups. False content and disinformation results are similar to the general results, but the misleading results gave us different findings. Therefore, the focus is on misleading content.

For reliability, we apply the "Split-half test" to the results. In this test, dictionaries prepared for the robustness of the dictionary-based analysis are randomly divided into two, and the analysis is repeated for general content and

misleading content. Similar results were obtained at the end of the robustness test, and the analysis was reliable.

Results

We examined the fifty-nine fake news from Indonesia. When we examined all the news, we found that the most frequently used words in the news are "Islam," "Muslim," "terrorist," "Aceh," and "densus." The Figure 1 shows the most frequently used in the content of fake
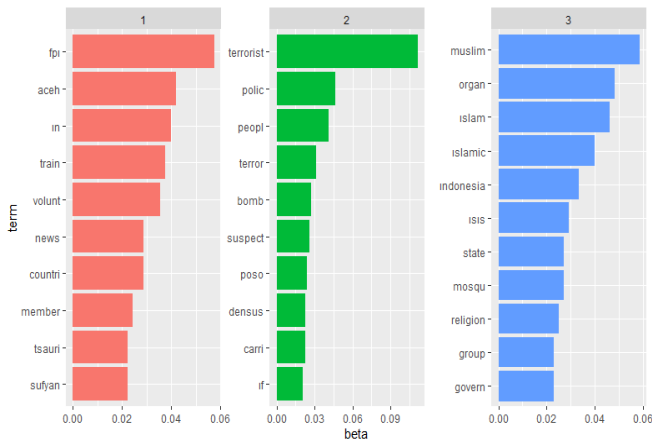

news.

Figure 1. World cloud Chart

After finding the most used words, the topic analysis was performed. Within the scope of the topic analysis, we divided the news into three separate topics by the computer-based analysis on the most frequently used words. According to these results, all topics are related to "ISIS," "Aceh," and "Terrorism in Sulawesi." The first topic is about the separatist movement that has been going on for many years in Aceh. The second topic is Jemaah Ansharut Daulah, which carried out terrorist acts in Sulawesi and many parts of

Indonesia. The last topic is ISIS, which organizes terrorist attacks in many parts of the world.

Figure 2. Topic Model

After conducting the topic model, we made a sentiment analysis of the news. As a result of the sentiment analysis, we revealed that the emotions of fear and trust are the two most dominant emotions in the sentiment analysis of the news. When we looked at the words that increase the sense of fear, words such as attacking, terrorism, destroyed, and barbaric are observed as more dominant. Other negative sentiments, such as anger and sadness, are very similar to words that cause fear. We find that the words that increase trust are 'nation', 'god', 'faith', 'justice', and 'bless'. When we look at the polarity results, we saw that fake reports are adverse, and words such as terrorism, mafia, communism, and radical cause the negative result in polarity
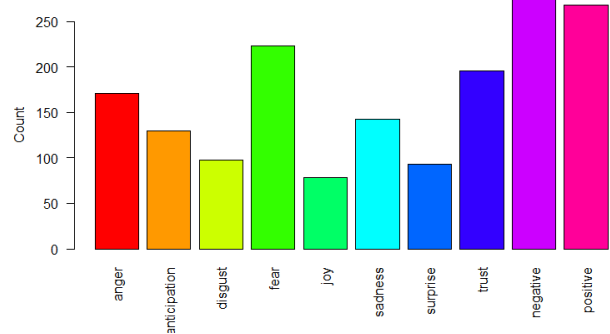
analysis.

Figure 3. Sentiment Analysis

As seen in the most frequently used words, many words are related to religion and terrorism. Similarly, in polarity and sentiment analyses, we found that religion-related words increased positive sentiment, while words related to terrorism increased negative sentiments. In this direction, we investigated whether the language related to religion or terrorism was dominant language or content with the dictionary-based analysis method. As a result of the dictionary-based analysis, we found that the news is predominantly related to terrorism. It was found that the language related to terrorism or violence in general news was 62.43%, while the language related to religion was 37.56%.
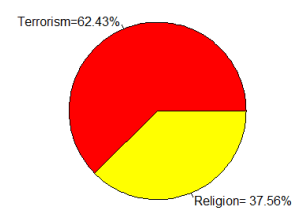
Prodi Hubungan Internasional FISIP UPN"Veteran" Jakarta

Figure 4. Dictionary Based Analysis for General Content

After these stages, based on the general fake news types, we divided them into disinformation, misleading content, and false content. We repeated dictionary-based analysis for these three categories. False content and disinformation dictionary-based results reflect the general results, but the misleading content results differ from the general results. While there is a dominance of the language of terror and violence in the general results, terror and religious language are close to each other in misleading content.
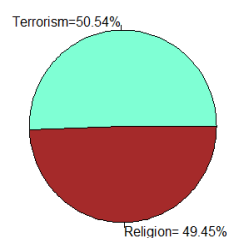

Figure 5. Dictionary Based Analysis for Misleading Content

Dictionaries prepared for the robustness of the dictionary-based analysis were randomly divided into two, and the analysis was repeated. Similar results were obtained at the end of the robustness test, and the analysis was reliable.

Finally, sentiment analysis was made for misleading content, as in general fake news content. We found a predominantly negative polarity similar to the general content, but unlike the general content, the difference between negative and positive was not much. Words such as 'rape', 'suicide', 'bombing', 'bloody', and 'extremism' increased the negative polarity. On the other hand, we saw that 'mercy', 'prophet', 'angel', and 'Quran' related to religion increased positive polarity.
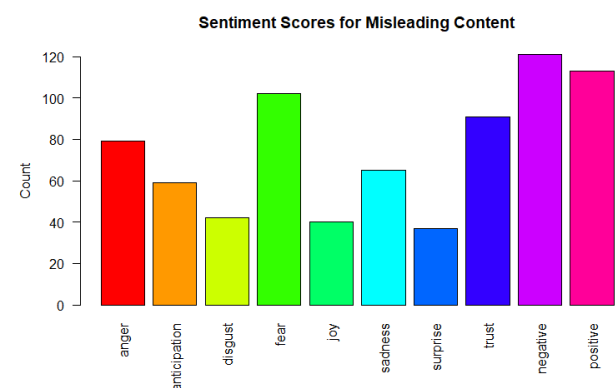

Figure 6. Sentiment Analysis for Misleading Content

In the sentiment analysis, it was found that the emotions of fear and trust were predominant. It has been observed that words such as 'danger', 'shooting', 'martyr', and 'bloody' increased fear, while words such as 'brother', 'prophet', 'worship', and 'Islam' increase trust.

Discussion

The study confirms the previous studies that social media becomes a means to spread terrorism-related fake news. However, the results show that the fake news occurred even in a peaceful situation.

The words 'Islam', 'Muslim', 'Aceh', and 'densus' that appear with the word 'terrorist' show that the topics on terrorism-related fake news may be related to other issues like government counter-terrorism programs, violence to Muslim, or Islamic world. The terrorism-related fake news is about the terrorist attack event and the misinformation to increase public opinion and solidarity when Muslims become victims. In other words, there is a "victimization" topic that focuses on violence, injustice, or unfairness to Muslims.

As a result of the analyzes made within this research, we reached three crucial points. First, terrorism-related fake news covers both domestic and international issues. The fake news content is about international terrorism like ISIS and domestic terrorism like the terrorism in Sulawesi. Furthermore, the fake news content also includes the misinformation about the event that is not directed related to terrorism event, like narcotics or communism. In other words, the terrorism-related fake news covers the domestic-international sphere and terrorist attack event-other issues, as long they can create fear in public.

The second important finding is that the language used in fake news is predominantly related to terrorism and violence. The domination of these two languages confirms that the purpose of fake news is to create fear in society. When terrorism is defined as the action to create fear, then if the fake news also creates fear, in circumstances, situations and conditions, we may argue that fake news is a form of terrorism. Fake news is about the manipulation of information to influence public opinion for a specific interest. Thus, when the manipulation for political interest creates fears in society, terrorism then conceptually occurred. In this circumstance, the relations between terrorism and fake news are not only about the content and action, or terrorism becomes content in the fake news, but fake news that creates fear is also terrorism.

The third and final finding is, contrary to general fake news, the language of misleading content equally contains violence and religious language. Considering this result, we found that misleading content is hazardous in terms of manipulation of public opinion. Because of our polarity analysis, we found that religious-based words are positive, and words related to violence are negative. In other words, negative or violent news aims to manipulate the public negatively, while positive content aims to manipulate the public through religion. Because religion is a sensitive subject, this form of

manipulation is considered more dangerous.

We use the traditional fear of crime theory in this study, making the findings of this study more meaningful. Based on this theory, crime is frequently the fundamental premise of many countries' highest-grossing films, top-rated television shows, bestselling novels, and most popular video games. Typically, stories of criminal events take the lead among television and internet news sources and are often considered the most widely viewed. Many people become obsessed with violence (Tulga, 2020). Although violence has the potential to fascinate, it also can frighten the audience. The same shows and news stories that keep the public glued to their TV also make many people too scared of leaving their properties. Due to fear of crime, citizens frequently alter their habits, attitudes, and even places of residence (Taylor., et al, 2020). This theory is beneficial to demonstrate the effects of fake news on people's opinions, behavior, and psychology. An example of the relationship between this theory and fake news is the Westminster attack in 2017. The Westminster assault showed how false news could spread quickly by exploiting indignation. Following the assault, a photograph of a Muslim lady on the phone was widely disseminated, with the erroneous accusation that she was callously ignoring the bridge victims. Consequently, the image garnered hundreds of retweets, fueling an Islamophobic response from those on the far-right, who exploited it to bolster their anti-Muslim sentiments (Melley, 2002). However, the photograph was taken out of context, and additional photographs showed her to be upset.

Furthermore, this study supports the existing literature that the contents evoke high arousal sentiments such as anger, awe, and anxiety were more likely to go viral compared to low-stimulated sentiments such as sadness or pleasure. We find that those contents also exist in the fake news. However, our study did not focus only on sentiment analysis, but beyond the existing literature. We also examined whether religious or terrorist languages dominate this fake news. In addition, our study differs from the existing literature in terms of the method we used. Most studies in the current literature used the qualitative content analysis method, but in our study, we used the quantitative dictionary-based analysis method, where we can examine more sources in a short time.

Conclusion

Terrorism, one of the biggest problems that the world remains face today, and fake news creators frequently create content related to it. Especially in times of crisis such as terrorism, fake news manipulates the emotions of society and makes some minority groups a target. After the terrorism crises, there are cases where opportunistic fake news creators exploit these crises for their benefit, and the number of these cases is increasing with the development of social media technologies.

The findings of this study confirm that social media is used to share and spread fake news about terrorism. As previous literature explained, social media provide an environment where information, including fake news, is easily shared and quickly circulated among individuals in a social network. Government and non-government organizations like MAFINDO are needed to share information to counter fake news. Therefore, people know where they have to recheck or report the suspected information. The social bots may be used in this process. If people trust and accept the fake news about terrorism as correct information, without rechecking and criticizing the credibility of the information, it will create problematic situation. The social media literacy and the capacity of the individual to filter, recheck,

and criticize terrorism-related information should be increased to avoid the negative impact of fake news contents.

Finally, despite these important and interesting findings, our study has a significant limitation. This study analyses a limited number of fake news. Therefore, future studies may overcome this limitation by selecting multiple countries as cases or increasing the date range of fake news.

Reference

Adnan, S. A. (2019) Mengenal Tujuh Jenis Hoaks, medcom.id. Retrieved on January 30, 2021, from https://www.medcom.id/telusur/cek-fakta/4KZ6rAqK-mengenal-7-jenis-hoaks

Ahmad, S., Asghar, M.Z., Alotaibi, F.M. et al. (2019). Detection and classification of social media-based extremist affiliations using sentiment analysis techniques. Hum. Cent. Comput. Inf. Sci. 9, 24 (2019). https://doi.org/10.1186/s13673-019-0185-6

Al-Rawi, A. (2016). Video games, terrorists, and ISIS's Jihad 3.0. Terrorism and Political Violence. 4. https://doi.org/10.1080/09546553.2016.1207633; Conway, M. 2016. Determining the role of the internet on violent extremism and terrorism: Six suggestions for progressing research. Studies in Conflict & Terrorism. 40 (1). https://doi.org/10.1080/1057610X.2016.1157408

Awan, I. (2017). Cyber-Extremism: Isis and the power of social media. Social Science and Public Policy. 54. 138-149. https://doi.org/10.1007/s12115-017-0114-0

Berger, J. (2011). Arousal increases social transmission of information. Psychological science, 22(7), 891-893.

Bonikowski, B., & Gidron, N. (2015). Populism in legislative discourse: Evidence from the European Parliament. Unpublished manuscript, Harvard University.

Bradshar, S., Howard, P. N., Kollanyi, B., Neudert, L.M. (2019). "Sourcing and Automation of Political News and Information over Social Media in the United States, 2016-2018." Political Communication 0: 1–21. https://doi.org/https://doi.org/10.1080/10584609.2019.1663322.

Carchiolo V., Longheu A., Malgeri M., Mangioni G., Previti M. (2018) Terrorism and War: Twitter Cascade Analysis. In: Del Ser J., Osaba E., Bilbao M., Sanchez-Medina J., Vecchio M., Yang XS. (eds) Intelligent Distributed Computing XII. IDC 2018. Studies in Computational Intelligence, vol 798. Springer, Cham. https://doi.org/10.1007/978-3-319-99626-4_27

Chen, K. X. (2019). Fake News After a Terror Attack: Psychological Vulnerabilities Exploited by Fake News Creators. In Learning from Violent Extremist Attacks: Behavioural Sciences Insights for Practitioners and Policymakers (pp. 435-451).

Chun, W. H. K. (2006). Control and freedom: Power and paranoia in the age of fiber optics. Cambridge, MA: The MIT Press

Cvetijevicm S, and Hochmair, H. (2018). Analyzing the spread of tweets in response to Paris attacks. Computers, Environment, and Urban Systems. 71. 14-26. https://doi.org/10.1016/j.compenvurbsys.2018.03.010

Datareportal. (2017). Digital 2017: Indonesia. Retrieved on July 4, 2021 from https://datareportal.com/reports/digital -2017-indonesia?rq=Indonesia Data Portal

Datareportal. (2019). Digital 2019: Indonesia. Retrieved on July 4, 2021, from https://datareportal.com/reports/digital -2019-ecommerce-in-indonesia?rq=Indonesia

Duille, T., and Tamma, S. (2021). Political language and fake news, some consideration from the 2019 election in Indonesia. Indonesia and the Malay World. 49 (143). https://doi.org/10.1080/13639811.2021.1862496

Fessler, D. M., Pisor, A. C., & Navarrete, C. D. (2014). Negatively-biased credulity and the cultural evolution of beliefs. PloS One, 9(4), 1–8.

Fischer-Prebler, D., Schwemmer, C., Fiscbacj, K. 2019. Collective sense-making in times of crisis: Connecting terror management theory with Twitter user reactions to the Berlin terrorist attack. Computer in Human Behavior. 100. 138-151. https://doi.org/10.1016/j.chb.2019.05.012

Fischhoff, B., Gonzalez, R. M., Small, D. A., & Lerner, J. S. (2003). Judged terror risk and proximity to the World Trade Center. In The risks of terrorism (pp. 39-53). Springer, Boston, MA.

Freelon, D., Wells, C. (2020). "Disinformation as Political Communication." Political Communication 0: 1–12.

G. Mahestu and T. A. Sumbogo. (2020). "Marketing of Identity Politics in Digital World (Netnography Study on Indonesian Presidential Election 2019)," 2020 International Conference on Information Management and Technology (ICIMTech), 2020, pp. 693-698, doi: 10.1109/ICIMTech50083.2020.9211242.

Goldberg, A. (2016, December 7). The Comet Ping Pong gunman answers our reporter's questions. New York

Times. Retrieved from http://www.nytimes.com/2016/12/07/ us/ edgar-welch-comet pizza-fake-news.html

Grün, B., & Hornik, K. (2011). topicmodels: An R package for fitting topic models. Journal of statistical software, 40(1), 1-30.

Guo, L., Vargo, C. J., Pan, Z., Ding, W., & Ishwar, P. (2016). Big social data analytics in journalism and mass communication: Comparing dictionary-based text analysis and unsupervised topic modeling. Journalism & Mass Communication Quarterly, 93(2), 332-359

Innes, Martin, Daviews, Bethan, Lowe, Trudy. 2019. Counter-governance and' post-event prevent': Regulating rumours, fake news and conspiracy theories in the aftermath of terror. International Journal of Law Crime and Justice. https://doi.org/10.1016/j.ijlcj.2019.100 370

Johnson, J. (2018). The self-radicalization of white men: "Fake news" and the affective networking of paranoia. Communication Culture & Critique, 11(1), 100-115.

Keller, T. R., Kliner, U. (2018). "Social Bots in Election Campaigns: Theoretical, Empirical, and Methodological Impications." Political Communication 0: 1–19. https://doi.org/10.1080/10584609.201 8.1526238

Khaldarova, I., & Pantti, M. (2016). Fake news: The narrative battle over the Ukrainian conflict. Journalism Practice, 10(7), 891–901.

Kostakos, P., Nykanen, M., Martinviita, M., Pandya, A., & Oussalah, M. (2018). Meta-Terrorism: Identifying Linguistic Patterns in Public Discourse After an Attack. 2018 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM). doi:10.1109/asonam.2018.8508647

Lazer, D., et al. (2018). "The Science of Fake News: Addressing Fake News Requires a Multidisciplinary Effort." Science 359 (6380): 1094–96. https://doi.org/DOI: 10.1126/science.aao2998

Lerner, J. S., Gonzalez, R. M., Small, D. A., & Fischhoff, B. (2003). Effects of fear and anger on perceived risks of terrorism: A national field experiment. Psychological Science, 14(2), 144–150.

Li, J. 2020. "Toward a Research Agenda on Political Misinformation and Corrective Information." Political Communication 0 (0): 1–11. https://doi.org/https://doi.org/10.1080/ 10584609.2020.1716499.

Mastel Indonesia (2019) Hasil Survey Wabah Hoax Nasional 2019. Retrieved on April 10, 2021 from https://mastel.id/hasil-survey-wabah-hoax-nasional-2019/.

McDougall, J. (2019). Fake News vs Media Studies: Travels in a False Binary. Palgrave M. Cham

Melley, T. (2002). Empire of conspiracy: The culture of paranoia in postwar America. Ithaca, NY: Cornell University Press.

Neo, R. (2020). A cudgel of repression: Analysing state instrumentalisation of the 'fake news' label in Southeast Asia. Journalism, 1464884920984060

Oktaviansyah, E., and Rahman, A. (2019). Predicting hoax spread in Indonesia using SIRS model. Journal of Physics: Conference Series. 1490. 012059

Paul, E. (2010). Obstacles to democratization in Southeast Asia: A study of the nation-state, regional and global order: Springer.

Posetti, J., Matther, A. (2018). "A Short Guide to the History of 'Fake News' and Disinformation: A Learning Module for Journalists and Journalism Educators." International Center for Journalist. 2018. https://www.icfj.org/news/short-guide-history-fake-news-and-

disinformation-new-icfj-learning-module

Rasidin, M. et al. (2020) 'Peran Pemerintah Dalam Mencegah Penyebaran Hoaks Tentang Pemilu 2019 di Indonesia', Diakom: Jurnal Media dan Komunikasi, 3(2), pp. 127–137. doi: DOI: 10.17933/diakom.v3i2.76.

Roodiijn, M., & Pauwels, T. (2011). "Measuring Populism: Comparing Two Methods of Content Analysis," West European Politics, 34:6, 1272-1283.

Rudner, M. (2016). "Electronic Jihad": The internet as Al Qaeda's catalyst for global terror. Studies in Conflict & Terrorism. 40(1). https://doi.org/10.1080/1057610X.2016.1157403

Sunstein, C. R. (2014). On rumors. Princeton University Press.

Taylor, R. W., Caeti, T. J., Loper, D. K., Fritsch, E. J., & Liederbach, J. (2006). *Digital Crime and Digital Terrorism*. Boston: Pearson.

Thielen, Alexander, Ake, SIvertun; Hyllengren, Peder; Alvinius, Aida. 2019. Frames of the terrorist attack in Sweden: a qualitative study of true and fake news coverage. International Journal of Emergency Management 15(3).

Tulga, A. Y. (2020). The Role of Mass Media in Terrorism and Its Effect on Individuals. İnsan ve İnsan, 7(25), 47-64.

Vasu, N., et al. (2018). Fake News: National Security in the Post-Truth Era. Singapore: RSIS-NTU

Weinberg, L. (2005). Global Terrorism: A Beginner's Guide. Rochmont: Oneoworld.

Welbers, K., Van Atteveldt, W., & Benoit, K. (2017). Text analysis in R. Communication Methods and Measures, 11(4), 245-265.

Zimmermann, F., Kohring, M. (2020). "Mistrust, Disinforming News, and Vote Choice: A Panel Survey on the Origins and Consequences of Believing Disinformation in the 2017 German Parliamentary Election." Political Communication 0 (0): 1–23. https://doi.org/https://doi.org/10.1080/10584609.2019.1686095.