Virality is not enough when the audience misses the point: A Content Analysis of YouTube Comments on Environmental Documentary "Sexy Killers"

IKA KARLINA IDRIS
Monash University, Indonesia

NUURRIANTI JALLI
Northern State University, United States

M. LAEEQ KHAN
Ohio University, United States

SUNARYO
Universitas Paramadina, Indonesia

ABSTRACT

During the Indonesian presidential election campaign, a documentary on coal mining problems in Indonesia titled " Sexy Killers" became viral and was highly engaged on YouTube in early 2019, attracting 36 million views and above 100,000 comments. The documentary also received mainstream media coverage and had such a far-reaching appeal that it swayed many voters into not voting in the election. Showing the impact of coal mining on Indonesia's environment and its people, the documentary exposed networks of business owners and politicians who had stakes in the coal mining company. This research thus delves into understanding the public discourse, especially the high number of YouTube comments on the documentary. The analysis revealed that despite the documentary's widespread popularity, the discussion within the comments did not focus on the environmental problems (72.9%). Most of the comments discussed the political campaign and presidential candidates (41.3%), instead of discussing the environmental impact of coal mining in Indonesia (13.9%). The research is valuable in highlighting the centrality of political debates dwarfing real environmental issues in Indonesia. Environment activists use documentary movies as one of their advocacy strategies, but it must be followed by audience engagement strategy to assure the discussions are still relevant to increase audience awareness on the issue.

Keywords: *Social media, environment, text analysis, YouTube, Indonesia.*

INTRODUCTION

Home to one of the largest rainforests in the world, Indonesia faces immense environmental challenges that merit attention. About 52.1% of the country is forested, supporting a myriad of flora and fauna species (United-Nations, 1997). As one of the largest coal exporters globally, Indonesia faces problems related to coal mining, especially on its environmental and social impacts (Atteridge et al., 2018; Jensen, 2016; PWYP Indonesia, 2017; Setyawan, 2019). During the Indonesian 2019 presidential campaign, a documentary movie, "Sexy Killers," covering coal mining practices in Indonesia, was published on YouTube. This documentary produced by WatchDoc Image production house revealed how the mining activities endangered communities' lives and the environment near the mining areas.

The documentary had successfully brought the public's attention to the coal mining issues during Indonesia's presidential election in April 2019. It was published on YouTube in the same week of the national election in which Indonesians voted for presidential candidates members of national and local legislatures. The movie attracted public attention and was more popular on YouTube than any video related to the election published on the same platform. Just one month after it was published, the movie had 22.8 million views and 100,000 comments on YouTube. It received more views and comments than any videos related to political and candidates' debates on YouTube. Its immense popularity even led to its temporary ban by local authorities when it was scheduled for a screening at a proposed power plant location, as it was deemed to have "insulted" the presidential candidates (Swaragita, 2019). Two years after, the video had 36.5 million views (February 1, 2022), around 912 thousand likes, and 100,980 comments.

The most important issue covered by the movie is the stoke ownership of the coal mining companies owned by the presidential candidates' families (Swaragita, 2019). The movie showed detailed connections between the coal companies and both presidential candidates—Joko Widodo and Prabowo Subianto—and the vice president candidate Sandiaga Uno. Furthermore, it explained how some senior officials in Widodo's administration also have stocks in mining companies and his administration has made policies that benefited the mining companies (Syahni, 2019). The movie also indicated that even Widodo's vice president—Ma'ruf Amin—came from an Islamic organization and was the chairman of the Indonesian Ulema Council (MUI) involved in a shariah-compliant certification for the coal companies. The council gives shariah certification in Indonesia for companies whose business and financial principles align with the Islamic principle (Faridah, 2019).

After it was published, the documentary sparked an abstain movement in the 2019 election because the political system in Indonesia was still corrupted by political parties and their candidates, mining companies and current administration (Listy & Hantoro, 2019). The collusion in the coal mining industry shown in the documentary triggered young voters not to vote because they did not want to vote for any of the candidates involved in the environmental destruction caused by the extractive industry (Egeham, 2019).

Using a documentary to advocate environmental issues is not new (Shapiro & Park, 2017; Uldam & Askanius, 2013). It is used to create public awareness on the environmental issue and shape public opinion and mass media agenda (Boykoff & Yulsman, 2013; Shapiro & Park, 2017). Although such documentaries could create public attention and media coverage, they do not always effectively address the intended issues and problems advocated in the movie (Ling, Ali, & Mustaffa, 2019). Studies show that media agendas, ownership, political affiliation and journalists' knowledge on environmental issues could influence the media agenda and coverages (Bell, 1994; Boykoff & Yulsman, 2013; Wade, 1985).

Anderson's study (2009) on media agenda toward environmental issues demonstrates that media coverage on environmental issues lacks a comprehensive report on the problems and mainly just covers the "events" or what he called the "symptoms of the environmental changes." Media professionals have challenges from publicists and 'public relations' persons who try to spin and frame the story into "human interest, celebrity-focused entertainment style reporting" (Anderson, 2009, p. 178). While those kinds of soft news dominate the

headlines, more critical and complex issues, such as climate change and environmental disasters, are ignored.

Within this media atmosphere, the environmental advocates are now using social media to publish campaign materials and information intended to convey to the public (Kononova & Yuan, 2015; Shapiro & Park, 2017). Besides providing an outlet for publishing self-created videos, social media like YouTube is also considered a new place where public discussions occur (Deschamps, 2014). In his study on YouTube comments on environmental videos, Deschamps (2014) found that YouTube at some point functioned to provide discussion. However, it still focused on the content of the video and lacked a specific agenda on public policy.

This study of the movie "Sexy Killers" on YouTube aimed to analyze public discussion about environmental issues formed in the comments section of the movie on YouTube. By analyzing public discussion through online conversation, this study aimed to understand the public opinion and concerns related to environmental issues in Indonesia. The country is the fourth most significant social media market globally and the largest one in Southeast Asia. When "Sexy Killers" was published on YouTube, the country was in intense political debates because of the presidential election. Social media conversations during that time were crowded with social media influencers and social media troops that tried to shape public discussions (Ika, 2019; Jalli et al., 2019; Lim, 2017). This study is vital to see the focus of the discussion about the environment on YouTube and whether the discussion can become an alternate place for a deliberate discussion on environmental problems caused by coal mining.

The practical implication of this study is vital to help climate change advocates and activist groups to better plan advocacy strategies and message framing. Previous studies show that issues on coal mining, mining technology and its industry are more challenging to understand than issues such as education and health (Alves et al., 2021; Lacey et al., 2019). Therefore, public understanding of mining and its environmental impact relies heavily on how mass media, activists and politicians frame the issue (Černý & Ocelík, 2020; Meeks, 2023). In this documentary, we investigated the effect of a documentary on the public discourse about mining and whether the new digital platforms can enhance public understanding and shape the public agenda on the mining industry.

LITERATURE REVIEW

The literature of this study discusses three parts: YouTube as a new public sphere on the Internet and the importance of comments on social media platforms.

YouTube as a New Public Sphere

The Internet is now considered the most liberating technology because people can express their opinions by producing and/or sharing information. Scholars contend that a new public sphere on the Internet constitutes online interactions and public discussion (Dahlberg, 2016; Dahlgren, 2001; Debatin, 2008; Papacharissi, 2010). Before the Internet, mass media was considered a public sphere because discussion on public matters occurred (Ahmad & Lateh, 2016). Nowadays, the Internet is the new place, and it has features that the mass media does not have interactive conversation between its users (Papacharissi, 2021). Further, the interactivity feature of Web 2.0 could facilitate citizens to engage and influence the process

of public policy making and at the same time respond to mass media and other political agendas (Deschamps, 2014).

One of the social media platforms that could enable such discussion is YouTube (Deschamps, 2014; Kononova & Yuan, 2015; Shapiro & Park, 2017). This site with the slogan "Broadcast Yourself" is now visited by 1.9 billion Internet users every month (Thomas , 2019) and its scope can act as a new marketplace of ideas, public discussion and cultural exchange (Burgess & Green, 2013; Feinberg & Willer, 2012). YouTube's aim since its inception in 2005 was to revolutionize the way media is consumed by transforming passive TV viewing into a more interactive and engaging experience, where "user-generated content (UGC) would be pitted against professionally generated content (PGC)" (Van Dijck, 2013, p. 110). To this day, the platform continues to host a diverse range of media content and remains a crucial outlet for underrepresented voices, including activists (Rantes-García & Vite-León, 2022), independent filmmakers (Cunningham et al., 2023) and citizen journalists (Canevez et al., 2022) to share their stories that would otherwise not receive airtime on mainstream media. However, studies also show that YouTube does not always successfully extend one issue to go beyond national attention, or in other words, to become the attention of the global public (Uldam & Askanius, 2013).

As a new platform that enables video sharing, social media users engage daily with YouTube content and passive form of engagement, mainly consuming the video (Khan, 2017). However, the platform has turned into one of the search engines to get information and learn about new things (Khan & Idris, 2019). Writing comments on YouTube needs extra effort, such as creating a *Gmail* account and signing into the platform. Thus the number of views is more likely to be higher than the number of comments in a video. In YouTube, writing comments is the most active form of engagement because of extra effort from its user and a possibility of recognition when one writes a comment (Khan, 2017). Even in a political communication campaign, political parties focus only on disseminating messages, and do not dedicate time to reply to comments or engage with the audience (Balci & Saritaş, 2022).

The Importance of Comments on Social Media Platforms

According to Santana (2016), one of the essential components of Web 2.0 is the commenting forums. Its development has allowed an organization or content producer to interact with the readers and engage them with the current issues. On YouTube, a visitor can get various information when watching a video (Madden et al., 2013) because the site also provides information such as an ad, the popularity level of a video (number of likes, views, and comments), the response of the video in the comment section. In mass communication, videos that are distributed through a mass medium such as television or movie are the only source of messages (Lingam & Aripin, 2017). However, the video is not the only source of messages through new media such as video-sharing platforms because the comments section can also provide information. The comment feature contains an important message (Shekaliu et al., 2018). In advocacy videos about the environment, the comments could also convey their own public opinion about such issues (Kononova & Yuan, 2015).

In his study on YouTube video about environmental issues, Deschamps (2014) found that public discussion in the comments section opens an opportunity for users to transform and challenge the narrative by presenting new information, misinformation, or ideas. He

contends that the narrative could influence the visitors' perception of the issue on the video and, at some point, influence the public's sentiment on public policy. Another study from Shapiro and Park (2017) showed that comments on YouTube could affect the overall post-video discussion about environmental problems. Later, discussions in the comments section could line with an overall public opinion toward the problem.

METHODOLOGY

Data of this study were gathered using text and social network visualization tool Netlytic (Gruzd, 2016). From around 100,00 comments, we collect 21,179 comments randomly. All of them were analyzed to see the most frequently used words in all comments. Meanwhile, this study selected 303 samples using a simple random sampling method to be analyzed based on the categorization above for content analysis. The samples were analyzed using quantitative content analysis; it is "a research technique for making replicable and valid inferences from texts (or other meaningful matter) to the contexts of their use" (Krippendorff, 2004, p. 25). There are five units in content analysis: physical, syntactical, categorical, propositional, and thematic (Krippendorff, 2004). This research uses the thematic unit, which relies on textual features distributed throughout a text or thematic narratives generated from the whole text. The text analysis was run with Voyant tools—a free web-based text analysis tool where users can analyze any form of text, including comments from social media. Before we analyzed the comments, we first cleaned the comments by deleting users' names and punctuation marks before we analyzed them. Cleaning the data is essential to make data visualization from Voyant easier to understand (Khan et al., 2021).

Following steps from Boettgerr and Palmer (Boettger & Palmer, 2010) in quantitative content analysis research, this research is done first by collecting comments and identifying the sample by collecting the comments using a simple random sampling method. The third step is categorizing the comments according to the coding scheme. The last step is to analyze the data by counting the frequency of themes in the comments. An intercoder reliability test was carried out on the categorizations, with a reliability score of between 70% and 95% across categories.

The Classifications of Youtube Comments

This study of comments on YouTube videos about an environmental issue based on the perspective that understands the commenting feature as a new place where public discussion and opinion emerges. According to Madden et al. (2013), comments on YouTube provide big data from its millions of daily users and can be useful for the study such as communication and sociology. One way to examine YouTube comments is by conducting content analysis and sentiment of comments (Madden et al., 2013; Thelwall et al., 2012). The content analysis focuses on the messages in the communication, or this context is the YouTube comments. Meanwhile, sentiment analysis focuses on the emotion or reaction within the whole context of a message.

From this perspective, an analysis of YouTube as a platform for public opinions to form needs initially to address main questions of what they are discussing (RQ1), whom they are talking about (RQ2), what they are responding (RQ3) and what kind of environmental issues they are emphasizing on the discussion (RQ4). The coding frame of this study thus included

three dimensions: (1) categories related to themes of the comments, (2) categories related to visitors' sentiment and (3) categories related to environmental issues. The first categories covered the object of the discussion found in the comments (RQ1) and the subject of the discussion or actors who were mentioned in the comments (RQ2).

Based on the issues covered in the comments, we found the object of the discussion was about the environment, economy, health, law, politics, religion and the movie itself. Discussions about the environment included comments that mentioned the condition, problems, impacts and coal mining solutions to the environment. Conversations about the economy involved topics about the scarcity of energy resources, economic values of coal and coal industry needs. Comments related to health consisted of the impact of coal mining on the health conditions of people who lived and worked at the mines. Furthermore, comments about law covered any discussion about acts, regulations and laws at the local and national levels. Discussions about politics involved comments about political parties, election, the contention of power and the abuse of power. Moreover, conversation about religion was related to mentioning any religion, religiosity and belief in God, including God's will and punishment. Lastly, the conversation about the movie focused more on the contents in the movie, its makers and their motivations.

Meanwhile, the subject of the discussion was about the victims, central government, local government, non-government organizations, mass media, citizens in general, members of parliament, mining companies, presidential candidates, supporters of the presidential candidates and the moviemaker.

The second categories included: (1) the visitors' sentiment (neutral, positive, and negative) and (2) responses (agree, confirm, disagree, and challenge). The sentiment categorization was adopted from Madden, Ruthven, and McMenemy's classifications to express personal feelings on YouTube comments (Madden et al., 2013). *Positive* sentiment is a comment in which the writer conveys a positive feeling or emotional response, *negative* sentiment is a comment in which the writer expresses negative personal feelings or emotion, and *neutral* sentiment is a comment in which the writer expresses their personal feelings or emotional response without saying positive and negative expressions.

The responses, adopted from Madden, Ruthven, and McMenemy's classifications, were operationalized based on the writers' approval of such an issue (Madden et al., 2013). *Agree* comments are when the commenter says that he has the same opinion as the previous comments or the movie's content. *Confirm* comments go beyond approving previous comments or the movie's content by providing supporting information or evidence. *Disagree* comments are those in which the writer says he disapproves of the previous comment or content of the movie. *Challenge* comments are similar to those of disagree ones but will support arguments or demand explanations from the previous commenter.

The third category of the environmental issue was operationalized into five indicators, whether the comment discusses the environmental issue and its problems, impacts, solutions, environment issue in general, or does not discuss the environment.

RESULT AND DISCUSSION

The first text analysis of all 21,179 comments in Figure 1. showed that words such as "government" (*pemerintah*), "Indonesia," "citizen" (*rakyat and orang*), "electricity" (*listrik*), "film," and "video" appeared frequently. Besides, terms related to government appeared frequently, such as the name the incumbent President "Jokowi," "president" (*presiden*), "governor" (*gubernur*), and "leader" (*pemimpin*). Words that related to the environment and energy seemed to be use less frequently. Those words include "environment" (*lingkungan*), "energy" (*energi*), "coal" (*batubara/batu/bara*), "nature" (*alam*), and "thermal power plant" (PLTU). Although it appeared somewhat frequently, the word "god" (Allah) was among the most frequently used terms.

Figure 1: Frequently used words among the youtube comments for "Sexy Killers" movie

In addition to the most frequent words, this study looked specifically at three terms related to environmental problems in the movie: environment, electricity, and coal. We analyzed each term to see what words were being used frequently as companies known as word collocation (Miller, 2018). Our analyses revealed that the term "environment" (*lingkungan*) in Figure 2. was used mostly with the words "energy" (*energi*), "electricity" (*listrik*), and a symbol of "thumb up." Those words emphasized the benefits that can be gained from the environment, while at the same time, words that express the negative impact of the environment did not appear.

The second term, "coal" (*batubara*) in Figure 3. was used mostly with the words "Indonesia", "film", "power" (*tenaga*), "mining" (*tambang*), and "yes" (*ya*). In line with the first one, this term was also accompanied by the words that showed the benefit of ,""coal": mining and power. The last term "electricity" in Figure 4. was also used with relatively positive words such as "power" (*tenaga*), "for" (*untuk*), Indonesia, "people" (*rakyat*), and film. In other words, all three terms related to the environmental issue in the movie were used with words that were content relatively expressing positive comments toward the benefit of natural resources.

Figure 2: The most frequently used words using with the term "Environment" (*Lingkungan*)

Figure 3: The most frequently used words using with the term "Coal" (*Batubara*)
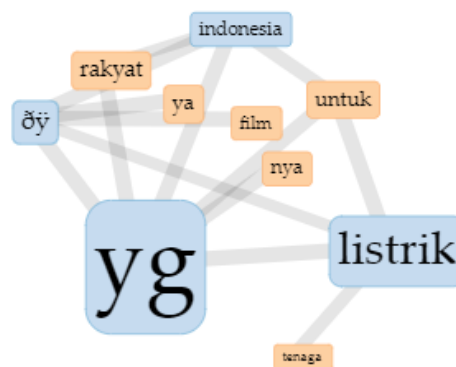

Figure 4: The most frequently used words using with the term "Electricity" (*Listrik*)

The text analysis alone cannot fully capture the discussion on YouTube comments in this study. To answer the research questions (RQ1-RQ4), we conducted a quantitative content analysis from 303 samples of comments. We found that themes related to "politics" (election and government performance) were dominating the discussion, followed by themes about the content of the movie itself, environment, other, religion, economy, law, and health (see

Table 1). As the movie was published during the presidential campaign, the conversation about politics has dominated the discussion.

Discussion about the movie (23.8%) came out as the second most discussed in the comment, although the amount is only half of the discussion about politics (41.3%). Comments related to the movie especially came from viewers who expressed their amazement and surprise. Some comments stated that the moviemakers have helped them understand the impact of coal mining in Indonesia. The movie "sexy killers" investigates and presents the impact of coal mining on people's lives, especially those who live close to the mining area, the power plant area, and the coastal area where container ships carrying coal frequently pass by the coastal. However, this study revealed that the themes related to health and law were the least frequently discussed themes. We found only 2% of the comments discussed about law and health impact.

Table 1: The theme of the comments

Theme	Frequency	Percentage
Environment	42	13.9
Economy	12	4
Health	2	0.7
Law	4	1.3
Politics	125	41.3
Movie content	72	23.8
Religion	19	6.3
Other	27	8.9

The second research question asked the subject of the discussion on YouTube comments. Our analysis (Table 2) revealed that most comments did not mention a specific subject (none). The top five parties mentioned in the comments were the movie maker, center government, victims, presidential candidates, and supporters of presidential candidates. Meanwhile, the least parties mentioned were non-government organizations (NGOs), members of parliament, and mass media organizations. We found only 12.2% of the comments discussing the victims of coal mining, even though the movie put them at the centre of the story and how they could not access fair compensations and were abused by the coal mining companies.

Table 2: The subject of the comments

Subject	Frequency	Percentage
Victims	37	12.2
Center government	46	15.2
Local government	21	6.9
Non-government organization	0	0
Mass media organizations	4	1.3
Citizen in general	23	7.6
Members of parliament	3	1
Mining company	15	5
Candidates	34	11.2
Supporters of presidential candidates	24	7.9
Moviemaker	47	15.5
None	59	19.5

The third research question investigated the viewers' response to the movie's previous comments or content. In this study, we found that the predominant sentiment of the comments was negative, followed by positive and neutral (Table 3). YouTube users who commented on this environmental issue were firm about their feelings, whether to feel negative and pessimism or feel positive because the frequency of comments with neutral sentiment was low.

Table 3: The sentiment of the comments

Sentiment	Frequency	Percentage
Neutral	26	8.6
Positive	120	39.6
Negative	155	51.2

The writers' responses in the comments mainly agree, followed by confirming, challenge, and disagree (Table 4). In total, the frequency of comments expressing agreement and confirmation reached 79.5%, meaning that the discussion in the comments section of this video supported the information and opinion from the video makers. However, based on Madden, Ruthven, and McMenemy's classifications (2013), a *confirming* comment provides additional information to reinforce facts or opinions in the movie, rather than just agreeing with the message in the movie. Around 23.1% comment fell in this category, meaning that there were efforts from commentators to support their claims, and not just amplifying messages.

Table 4: Response to the comments

Response	Frequency	Percentage
Agree	171	56.4
Confirm	70	23.1
Disagree	17	5.6
Challenge	42	13.9

The last research question explores what kind of environmental issues they emphasize in the YouTube comments. Our analysis showed that most comments did not mention or discuss an environmental issue (72.9%). In contrast, the rest of the comments related to the environment were mainly about the problems, followed by impact, solution, and just the environment in general. The possible explanation for this finding is related to the time when this video was released on YouTube, which was during a political campaign or a week before the election day. Therefore, mass media agendas and public discussions were dominated by election and politics.

Second possible explanation is related to the information skills needed to understand environmental issues. Khan and Idris (2019) categorized four information literacy skills on the Internet into information seeking, sharing, and verification. The last one, verification skill, needs a higher mental model than the other two skills because it needs 'critical evaluation skills' to judge information. Coal mines in Indonesia are mainly located in the Eastern part of Indonesia, less developing areas, and lack of internet access. Meanwhile more than half of the population who have access to the Internet, including YouTube viewers, live in urban areas (Kemp, 2021). Audiences of this movie were mainly coming from urban and a better

developing area, meaning that they were geographically and psychologically "far" from the conversation about coal mining. To discuss the environmental issue of coal mining, including problem, impact, and solution, one needs to have sufficient knowledge to critically evaluate information. If one does not have enough knowledge about environmental issues and especially coal mining, then it will be difficult to talk about it and it will be easier to discuss something else, such as politics and election.

Table 5: Themes of conversation related to environmental issue

Theme	Frequency	Percentage
Problem	30	9.9
Impact	25	8.3
Solution	19	6.3
Environment in general	6	2
Not about environment	221	72.9

We found that at least two topics dominated the discussion on YouTube comments about environmental issues. The first discussion was related to a political issue, especially about the central government and presidential candidates. The tense discussion about politics even distorted viewers who wrote comments on the environmental issues brought in the movie. Below is one of the comments that we think represented commenters who wanted to discuss the environmental problems but were trapped in the dynamic of online conversations:

> "Hey stupid, the main point of this documentary film is about unethical businessmen in mining, governments who did not obey the law, and steam power plants that are environmentally friendly! Go watch the movie carefully one more time!"

The second discussion was about the contents of the movie itself that presented the dirty business practices of the coal mining company, and it was supported by powerful people in the country, including the family of the Indonesian President Joko Widodo and his rival Prabowo Subianto. Some comments in this study expressed the naivete of supporters of both presidential candidates because both candidates supported the coal mining companies.

Nevertheless, the main messages of the movie about the impact of the coal mining industry and environmental problems it caused were also discussed, but not had not successfully become the main concerns of the viewers. The discussion also seemed to occur in vitriolic ways because outrageous negative sentiments dominated it. On the other hand, the responses dominantly agree and confirm. Most of it approved the movie's contents—environmental problems and unethical coal mining practices. In addition, comments specifically related to the environment focused on the problem and impact sides and less on the solution.

CONCLUSION & RECOMMENDATION

A documentary movie is commonly used in an advocacy campaign, especially portraying environmental problems. The availability of video-sharing platforms such as YouTube, with its groundbreaking features like streaming, video uploads, and social networking capabilities (Van Dijck, 2013), has allowed advocacy organizations to effectively communicate their message and reach a larger audience, overcoming the restrictions imposed by conventional mass media. Furthermore, YouTube's platform design, where user choices are guided by algorithms and features like referral systems and ranking mechanisms (Van Dijck, 2013), may have played a role in the widespread popularity of the "Sexy Killers" documentary on the platform during the election season.

"Sexy killers" highlights the impacts of Indonesia's coal mining industry and has effectively expanded advocacy efforts to a wider audience and captured public attention. It has also been successful in shaping public opinion about the issue, as comments revealed agreement and confirmed that such problems exist in Indonesia (79.5%). Releasing the documentary during the week of the presidential election had a powerful impact and sparked discussions about not voting for certain candidates due to their connections to the mining industry and their contribution to environmental problems.

Mass media and many new digital platforms are the battlegrounds for agenda building during a political campaign. In Indonesia, the 2019 presidential campaign ran for seven months, but both candidates did not prioritize the environmental problem in Indonesia. Moreover, the mass media in Indonesia missed focusing their coverage on environmental issues (Walton, 2019). This study shows that the comments section on a video-sharing platform can transform into a new place to discuss an alternate topic that the mass media do not cover. Or in other words, this study and Deschamps' study on environmental issues show that advocacy groups can challenge the narrative by presenting new information and ideas on social media (Deschamps, 2014).

Although its launch has gathered public attention, the public discussion shown in the comments was mainly related to the political discussion and the movie contents. The dominant subject of the discussion was also the movie makers and their motivation. The most critical issue about environmental damage because of coal mining (13.9%), the victims' health and human rights (12.2%) were discussed but in a tiny number of conversations. The text analysis results from the 21,179 comments showed that words mentioning environment and nature were small compared to electricity, people, and government. Moreover, the words 'nature' and 'coal' were primarily used with positively associated words such as electricity, energy, Indonesia, and people's needs. Negatively associated words such as pollution and damage were not frequently used with the word 'nature,' meaning that public discussion talked mostly about people's need for energy from nature instead of its damage.

Social media platforms enable anyone to produce, share, and build their agendas as the newly emerging public sphere. In this study, a group of environmental activists tried to make their agenda about the impacts of the coal mining industry in Indonesia become public attention. Although the movie was popular on YouTube and covered by the traditional media, the discussion did not focus on environmental problems. In this case, social media platforms such as YouTube can provide an outlet for alternative information and a public discussion

forum. However, the discussion themes were still dominating with politics, or in this case, the Indonesian presidential election. Discussions on the YouTube comment section were also full of hate, rage, and abuse. Such conversation no longer contributes to the civic culture of the public sphere.

This study sheds light on the need for a greater realization in Indonesia (and beyond) about environmental issues. Our analysis of many comments of a viral video that gained popularity during the presidential elections proves a glimpse into how politics trumps real environmental issues that impact people. It was rare in Indonesia's media that a documentary movie on environmental issues received nationwide public attention. Instead of focusing on the environment, people's discussion on YouTube showed polarization around political candidates and their parties. The research is valuable in highlighting the centrality of political debates dwarfing real environmental issues in Indonesia. Future research can shed more light on why discussions on social media derail when done in a politically charged landscape.

From this study, we draw some recommendations for advocacy groups, especially those who work on environmental issues. *First* is to put the environmental problem and its impacts at the center of the frame. The key messages must consistently emphasize the environmental problems. We recommend this from our study that shows politics dominated the conversation about the documentary. We believe the content of the video that emphasizes presidential candidates and the launch time that only a week before the election had contributed to this conversation about the political issue of the movie. *Second*, we recommend publishing such advocacy material not too close to the election time to give other stakeholders, especially other advocacy groups, time to strengthen the narrative and support the advocacy. A collaboration and engaging more stakeholders in the issue could help keep the conversation circulated on social media for a longer time. Thus, the documentary video would have time to challenge the main narrative built by the political candidates and their campaign teams. *Three*, compared to the discussion on environmental problems and their impacts, discussion on the solution had the smallest frequency of all. This aspect is also the least discussed in the video. Creating public awareness on environmental problems through a shocking documentary video is one thing, but engaging the public to act on the solution is another thing. We believe that the documentary movie would be impactful for the public if they also provide solutions, from the individual level to a society level. Lastly, one needs a critical thinking skill to evaluate complex information on mining problems and environmental issues. Advocacy groups should work together with media literacy groups to empower targeted audiences.

BIODATA

Ika Karlina Idris is associate professor at Monash University Indonesia and a trained scholar in the area of social media analytics. Email: ika.idris@monash.edu

Nuurrianti Jalli is an Assistant Professor at School of Media and Strategic Communications, Oklahoma State University. Her research interests are include propaganda, media/ information warfare, mis/disinformation, and media and democracy in Southeast Asia. Email: nuurrianti.jalli@okstate.edu

M. Laeeq Khan is an Associate Professor and the founding Director of the Social Media Analytics Research Team (SMART) Lab at Ohio University's Scripps College of Communication. He holds a Ph.D. from Michigan State University and is an expert in social media, data analytics, AI, digital engagement, and technological transformation. As a computational social scientist, he uses technology and data to gain insights and solve global challenges. He has published extensively on various topics, including health communication and online misinformation, and has been recognized for his work by outlets such as The Hill, Tribune, and NPR. He also has a decade of experience in industry consulting and teaching, and is dedicated to mentoring the next generation of media, communication, and business scholars. Email: laeeqk@gmail.com

Sunaryo is a lecturer of Universitas Paramadina Jakarta and the researcher of The Paramadina Institute of Ethics and Civilization (PIEC), The Center for Islam and State Studies-Indonesia (CISS-Indonesia). The main research interest is the social and political philosophy, the theory of justice in a plural society, and philosophy, religion, and ecology. Email: sunaryo@paramadina.ac.id

REFERENCES

Ahmad, J., & Lateh, H. (2016). Media and the environment in Malaysia: An analysis on news coverage of landslide disaster in Kuala Lumpur. *Jurnal Komunikasi*: *Malaysian Journal of Communication*, *32*(2). https://doi.org/10.17576/JKMJC-2016-3202-26

Alves, W., Ferreira, P., & Araújo, M. (2021). Challenges and pathways for Brazilian mining sustainability. *Resources Policy*, *74*, 101648. https://doi.org/kddk

Anderson, A. (2009). Media, politics and climate change: Towards a new research agenda. *Sociology Compass*, *3*(2), 166–182. https://doi.org/dr8hc2

Atteridge, A., Aung, M. T., & Nugroho, A. (2018). *Contemporary coal dynamics in Indonesia.* SEI working paper 2018-04. Stockholm Environment Institute. https://www.sei.org/publications/contemporary-coal-dynamics-indonesia/

Bell, A. (1994). Climate of opinion: Public and media discourse on the global environment. *Discourse Society*, *5*(1), 33–64. https://www.jstor.org/stable/42887900

Boettger, R. K., & Palmer, L. A. (2010). Quantitative content analysis: Its use in technical communication. *IEEE Transactions on Professional Communication*, *53*(4), 346–357. https://doi.org/10.1109/TPC.2010.2077450

Boykoff, M. T., & Yulsman, T. (2013). Political economy, media, and climate change: Sinews of modern life. *Wiley Interdisciplinary Reviews: Climate Change*, *4*(5), 359–371. https://doi.org/10.1002/WCC.233

Burgess, J., & Green, J. (2013). *YouTube: Online video and participatory culture*. Polity Press.

Canevez, R. N., Karabelnik, M., & Winter, J. S. (2022). Police brutality and racial justice narratives through multi-narrative framing: Reporting and commenting on the George Floyd murder on YouTube. *Journalism & Mass Communication Quarterly*, *99*(3), 696–717. https://doi.org/10.1177/10776990221108722

Černý, O., & Ocelík, P. (2020). Incumbents' strategies in media coverage: A case of the Czech coal policy. *Politics and Governance*, *8*(2), 272–285. https://doi.org/kdfv

Cunningham, S., Mehta, S., Lunardi, G., & Healy, G. (2023). YouTube: The interface between television and social media entertainment. In D. Johnson (Ed.), *From Networks to Netflix: A guide to changing channels* (2nd ed., pp. 213-222). Routledge. https://doi.org/10.1093/acprof:oso/9780199970773.003.0006

Dahlberg, L. (2016). Democracy via cyberspace: Mapping the rhetorics and practices of three prominent camps. *New Media & Society, 3*(2), 157–177. https://doi.org/c783dn

Dahlgren, P. (2001). The public sphere and the net: Structure, space, and communication. In W. L. Bennett & R. M. Entman (Eds.), *Mediated politics: Communication in the future of democracy*. Cambridge University Press.

Debatin, B. (2008). The Internet as a new platform for expressing opinions and as a new public sphere. In W. Donsbach & M. W. Traugott (Eds.), *Handbook of public opinion research* (pp. 64–72). SAGE Publications, Ltd.

Deschamps, R. (2014). What potential for YouTube as a policy deliberation tool? Commenter reactions to videos about the Keystone XL oil pipeline. *Policy & Internet*, *6*(4), 341–359. https://doi.org/10.1002/1944-2866.POI376

Egeham, L. (2019, April 17). Film Sexy Killers disebut picu golput, ini kata Moeldoko. *Liputan6.com*. https://www.liputan6.com/pileg/read/3943555/film-sexy-killers-disebut-picu-golput-ini-kata-moeldoko

Faridah, H. D. (2019). Halal certification in Indonesia; History, development, and implementation. *Journal of Halal Product and Research (JHPR)*, *2*(2), 68–78. https://doi.org/10.20473/JHPR.VOL.2-ISSUE.2.68-78

Feinberg, M., & Willer, R. (2012). The moral roots of environmental attitudes. *Psychological Science, 24*(1), 56–62. https://doi.org/10.1177/0956797612449177

Gruzd, A. (2016). *Netlytic: Software for automated text and social network analysis.* [Software].

Idris, I. K. (2019, Februari 26). Mengenali jaringan penyebar hoaks. *Kompas*. https://www.kompas.id/baca/opini/2019/02/26/mengenali-jaringan-penyebar-hoaks

Jalli, N., Jalli, N., & Idris, I. (2019). Fake news and elections in two Southeast Asian nations: A comparative study of Malaysia General Election 2018 and Indonesia Presidential Election 2019. *Proceedings of the International Conference of Democratisation in Southeast Asia* (ICDeSA 2019), pp. 138–148. https://doi.org/kdfx

Jensen, F. (2016, June 29). Indonesia faces environmental time bomb after coal bust. *Reuters*. https://www.reuters.com/article/us-indonesia-coal-environment/indonesia-faces-environmental-time-bomb-after-coal-bust-idUSKCN0ZF03U

Kemp, S. (2021, Oct 21). *Social media users pass the 4.5 billion mark. We Are Social UK*. https://wearesocial.com/uk/blog/2021/10/social-media-users-pass-the-4-5-billion-mark/

Khan, M. L. (2017). Social media engagement: What motivates user participation and consumption on YouTube? *Computers in Human Behavior*, *66*, 236–247. https://doi.org/10.1016/J.CHB.2016.09.024

Khan, M. L., & Idris, I. K. (2019). Recognise misinformation and verify before sharing: A reasoned action and information literacy perspective. *Behaviour & Information Technology*, *38*(12), 1194–1212. https://doi.org/10.1080/0144929X.2019.1578828

Kononova, A., & Yuan, S. (2015). Double-dipping effect? How combining YouTube environmental PSAs with thematically congruent advertisements in different formats affects memory and attitudes. *Journal of Interactive Advertising*, *15*(1), 2–15. https://doi.org/10.1080/15252019.2015.1009524

Krippendorff, K. (2004). *Content analysis: An introduction to its methodology* (2nd ed). Sage.

Lacey, J., Malakar, Y., McCrea, R., & Moffat, K. (2019). Public perceptions of established and emerging mining technologies in Australia. *Resources Policy*, *62*, 125–135. https://doi.org/10.1016/j.resourpol.2019.03.018

Lingam, R. A., & Aripin, N. (2017). Comments on fire! Classifying flaming comments on YouTube videos in Malaysia. *Jurnal Komunikasi: Malaysia Journal of Communication*, *33*(4). https://doi.org/10.17576/JKMJC-2017-3304-07

Khan, M. L., Ittefaq, Y., Pantoja, Y. I. M., Raziq, M. M., & Malik, A. (2021). Public engagement model to analyze digital diplomacy on Twitter: A social media analytics framework. *International Journal of Communication*, *15*, 1741–1769. https://ijoc.org/index.php/ijoc/article/view/15698

Lim, M. (2017). Freedom to hate: Social media, algorithmic enclaves, and the rise of tribal nationalism in Indonesia. *Critical Asian Studies*, *49*(3), 411–427. https://doi.org/gh7f5s

Ling, L. Y., Ali, N. S., & Mustaffa, N. (2010). Youth media literacy in interpreting the ideology of the film documentary the Malayan Emergency. *Jurnal Komunikasi: Malaysian Journal of Communication*, *35*(2). https://doi.org/10.17576/JKMJC-2019-3502-12

Listy, D. L., & Hantoro, J. (2019, April 16). Film Sexy Killers dianggap kampanye golput, begini kata Dosen UNS. *Tempo.co*. https://nasional.tempo.co/read/1196245/film-sexy-killers-dianggap-kampanye-golput-begini-kata-dosen-uns

Madden, A., Ruthven, I., & McMenemy, D. (2013). A classification scheme for content analyses of YouTube video comments. *Journal of Documentation*, *69*(5), 693–714. https://doi.org/10.1108/JD-06-2012-0078

Miller, A. (2018). Text mining digital humanities projects: Assessing content analysis capabilities of Voyant tools. *Journal of Web Librarianship*, *12*(3), 169-197. https://doi.org/10.1080/19322909.2018.1479673

Balci, Ş., & Saritaş, H. (2022). Political communication on social media: The analysis of YouTube advertisements for March 31, 2019 local elections. *Turkish Review of Communication Studies*, *40*, 239–256. https://doi.org/10.17829/TURCOM.930855

Meeks, L. (2023). Blue bird in a coal mine: How 2020 Democratic presidential candidates framed climate change on Twitter. *Journal of Information Technology & Politics, 20*(2), 169-183. https://doi.org/10.1080/19331681.2022.2069182

Papacharissi, Z. A. (2010). *A private sphere: Democracy in a digital age*. Polity Press.

Papacharissi, Z. A. (2021). *After democracy: Imagining our political future*. Yale University Press.

PWYP Indonesia. (2017, May 9). Coal miners owe the Indonesian government hundreds of millions of dollars. https://pwypindonesia.org/en/coal-miners-owe-the-indonesian-government-hundreds-of-millions-of-dollars/

Rantes-García, G. M., & Vite-León, V. O. (2022). Digital activism on YouTube. The representation of power and counter-power relations in a video activism piece during the second round of the 2021 Presidential Elections in Peru. In López-López, P.C., Barredo, D., Torres-Toukoumidis, Á., De-Santis, A., & Avilés, Ó. (Eds), *Communication and applied technologies* (Smart Innovation, Systems and Technologies, Vol. 318, pp 191–200). Springer, Singapore. https://doi.org/10.1007/978-981-19-6347-6_17

Santana, A. D. (2016). Controlling the conversation: The availability of commenting forums in online newspapers. *Journalism Studies, 17*(2), 141-158. https://doi.org/gf3gpk

Setyawan, D. (2019, April 15). Sexy Killers, Batu Bara dan Oligarki. *IndoPROGRESS*. https://indoprogress.com/2019/04/sexy-killers-batu-bara-dan-oligarki/

Shapiro, M. A., & Park, H. W. (2017). Climate change and YouTube: Deliberation potential in post-video discussions. *Environmental Communication*, *12*(1), 115–131. https://doi.org/10.1080/17524032.2017.1289108

Shekaliu, S., Mustafa, S. E., Adnan, H. M., & Guajardo, J. (2018). *The use and effectiveness of Facebook in small-scale volunteer organisation for refugee children's education in Malaysia*. SEARCH, *10*(1), 53-78. https://fslmjournals.taylors.edu.my/the-use-and-effectiveness-of-facebook-in-small-scale-volunteer-organisation-for-refugee-childrens-education-in-malaysia/

Swaragita, G. (2019, April 16). Indramayu halts "Sexy Killers" screening for alleged hate speech. *The Jakarta Post*. https://www.thejakartapost.com/news/2019/04/16/indramayu-halts-sexy-killers-screening-for-alleged-hate-speech.html?src=mostviewed&pg=news

Syahni, D. (2019, April 16). In 'Sexy Killers,' journos probe Indonesian candidates' ties to Big Coal. *Mongabay*. https://news.mongabay.com/2019/04/in-sexy-killers-journos-probe-indonesian-candidates-ties-to-big-coal/

Thomas, O. (2019, June 11). 'Broadcast Yourself', Youtube told us. It might want to rephrase that. *San Francisco Chronicle*. https://www.sfchronicle.com/business/article/Broadcast-yourself-YouTube-told-us-It-13969852.php

Thelwall, M., Sud, P., & Vis, F. (2012). Commenting on YouTube videos: From guatemalan rock to El Big Bang. *Journal of the American Society for Information Science and Technology*, *63*(3), 616–629. https://doi.org/10.1002/ASI.21679

Uldam, J., & Askanius, T. (2013). Online civic cultures? Debating climate change activism on YouTube. *International Journal of Communication*, *7*(0), 1185–1204. https://ijoc.org/index.php/ijoc/article/view/1755

United-Nations. (1997). Indonesia: Country profile - Implementation of agenda 21: Review of progress made since the United nations conference on environment and development, 1992. https://www.un.org/esa/earthsummit/indon-cp.htm

Van Dijck, J. (2013). *The culture of connectivity: A critical history of social media*. Oxford University Press.

Wade, E. (1985). The miners and the media: Themes of newspaper reporting. *Journal of Law and Society*, *12*(3), pp. 273-284. https://doi.org/10.2307/1410121

Walton, K. (2019, April 15). Environment a missing topic as Indonesia election. *Al Jazeera*. https://www.aljazeera.com/news/2019/4/15/environment-a-missing-topic-as-indonesia-election-looms