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# The Writing on the Wall: Affective Politicization of the Sewŏl Disaster on Facebook

Liora Sarfati and Guy Shababo

In 2014, the South Korean ferry, Sewöl, sank. In sinking, it took with it 304 lives, as well as initiated broad public dissent that lasted several years. In this study, we investigate how online social media users employed and manipulated the emotions toward this disaster for political purposes. By the utilization of digital humanities methodologies (i.e., topic modeling and frequencies) on the data collected from selected Facebook accounts, we compared different strategies of online engagement with the intersection between mass death commemoration and political activism. In particular, we explored the delegitimization of President Pak Kŭn-hye, her impeachment, and the resultant elections in 2017.

Quantitative and qualitative analysis revealed that different social actors manipulated their audience's emotions through posts on their Facebook walls in a manner that politicized the more personal mournful discourse. These social actors associated the disaster with the president's ineptness, especially after her corruption was revealed in the November 2016 scandal. From that point onward, the online memorialization of the Sewŏl's victims became a weapon in the broader efforts to oust the president and to change the political system.

Keywords: digital humanities, Sewöl disaster, Facebook, affect, social media

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## Introduction

Disasters are events that create social reactions, political changes, and affect laden discourses that resonate years later. In contemporary South Korea, such ripples are augmented throughout social media and other online communication forms, which can operate with little supervision or direction from political and financial establishments. Just such a disaster, that is, the sinking of the Sewöl ferry in 2014, is explored here with the use of methodologies from the digital humanities. This was conducted in order to learn how in its aftermath the internet was harnessed for activism by different kinds of social actors. Social media discourses have been utilized in order to complement protests that occur constantly in the city, but they have not necessarily taken the same directions. For example, politicians who rarely visited the protest camp referred to the disaster in their speeches and social media posts; further, protesters discussed the disaster and the people they blamed for it differently, such whether they were chatting with their peers during the protests or when they were appealing to the larger audience of their online social networks.

The analysis of such online discourse is not possible through traditional methodologies. This is due to the fact that social media is a vast database and thus impossible to analyze without digital tools. During the initial onset of our exploration into the Sewöl disaster the debate was pursued ethnographically, is in a similar vein to, for example, historian Nan Kim.<sup>1</sup> This kind of on-the-ground engagement with the activists, however, could not enable proper analysis of the textual data that online social networks hold. Our project concurs with observations that have been made throughout the steady rise in the use of machine learning within the humanities.<sup>2</sup> This is in addition to the benefits of the automatic analysis of text, <sup>3</sup> as well as the assessment of intertextual relations within (and across) complex corpora.<sup>4</sup> Our main goal was to learn how different agendas of online activists, as expressed in social media, were related to their positioning in relation to the tragedy and the scopes of their political stances.

The present experimental research attests to the fact that Facebook has become a political arena in Korea. Further, the data requires exploring the tendencies within it using digital, as well as traditional methodologies combined. This study adds to the growing interest of scholars in employing digital methods in order to map and analyze dissent and politicized social discourses. Robert Ogie et al. showed that disasters create circles of affect that are distinguishable within the online discourses.<sup>5</sup> Previous studies that have used LDA to study the politization of social media include, for example, an exploration of the COVID-19 pandemic responses on twitter by Marlon I. Diaz et al.; investigations through Russian social media discourses by Olessia Koltsova and Sergei Koltcov; and work by Annett Heft et al. regarding European politics on Facebook.<sup>6</sup> Yang Ŭnkyung showed that the online discourse in Korea regarding the Sewŏl disaster was central in developing the social discontent and other political struggles that arose in relation to the tragedy.<sup>7</sup> Facebook's increased usage was explored from the perspective of consumers and through research on official pages, such as news outlets.<sup>8</sup> Min-Joon Lee et al. detected negative sentiments toward the president and heightened social stress in relation to this particular disaster, which was determined via an NLP approach to social media.<sup>9</sup> Hong et al. found that social media reflected community resilience from the first month after the disaster, while a year later the discourse has switched from emotional support to commemoration and solidarity.<sup>10</sup>

As such, we developed a method to focus on key terminology that featured in the discourse around the Sewöl disaster, as well as to offer the reader our observations on the potential of this analytical tool. First, we employed Latent Dirichlet Allocation (LDA), an unsupervised topic modeling algorithm, in order to find distinctive trends in the social media discourses that were explored. Then, we checked the frequency of keywords that appeared in most of the ten most recurring topics on the whole corpus, as part of our validation process to ensure data integrity. Last, we chose—through this mapping process—certain texts for close reading. Such tools have fast become indispensable to any researcher of the online contemporary public discourse.

We will begin this exploratory research by briefly explaining the disaster that serves as our case study. Then, we will delve into the particular choices performed in framing the social media data to be analyzed, as well as the methodology used. Most of the article is dedicated to elaborating on the findings. Lastly, having said this, we will we discuss our conclusions and insights about the potential of this methodology for similar research projects.

## The Public Reaction to the Sewol Disaster and its Aftermath

The Sewöl ferry sinking in April 2014 resulted in the loss of 304 lives, including those of 250 high school students.<sup>11</sup> It was not the first time that hundreds of passengers died in a ferry disaster in Korea,<sup>12</sup> but it was the

first time that such a disaster led to broad public dissent lasting several years, during which the president was impeached. A major reason for this scope of public reaction was the widespread availability of social media: where opinions, doubts, and rumors related to political agendas circulated. As an aside, this is a trend that has been discussed by Kang Jiyeon as common in Korean protest culture since the early 2000s.<sup>13</sup> The combination of an affect-laden disaster and everyone's ability to express publicly discontent with the government's handling of the situation led to delegitimization of the then-president Pak Kŭn-hye (often transliterated as Park Geun-hye).

After the magnitude of the loss was revealed, Pak refrained from extensive heartfelt appearances on national media. Even when she visited the notorious gymnasium in the southern tip of the Korean peninsula, where hundreds of families of missing passengers gathered to wait for further developments, she did not interact with them closely. This distant behavior won her disrespect and suspicion among the grieving parents, who remarked during interviews in the summer of 2014 that she was "heartless," "incapable of feeling pity," and "very unskilled in interpersonal communication."<sup>14</sup> She also refrained from expressing mournful emotions on the online social media platforms. Pak has maintained several social media accounts, including a Facebook wall since 2012, and although it has not been very active one may have expected her to use this broadly accessible medium to address the public on the disaster. Nevertheless, the first time that she referred to the tragedy on her wall was on April 29, 2014, two weeks after the sinking. With this context in mind, we analyze this specific post and the reactions to it later in the article.

Pak's long televised apology in May 2014, when tears rolled over her cheeks as she read the names of the people who died while trying to save others during the tragedy—and where the president said that she cannot sleep well since the event—did not convince the public.<sup>15</sup> She also refused to assign a powerful investigation committee. The activists expected that by reaching ten million signatures on a petition for a new special law (*t*<sup>w</sup>*kpyŏlbŏp*), she would enforce such an investigation.<sup>16</sup> Yet, even when the petition garnered more than ten million signatures, the law was not passed.<sup>17</sup> Furthermore, Pak did not issue any orders to salvage the sunken ferry for investigation until 2017. Her legitimacy eroded during various other disputes related to the rescue of trapped bodies, commemoration projects, and anniversary events, which she rarely attended.

At the same time, Mun Chae-in, the head of the opposition party, maintained closer contact with the victims' families, participated in their

protest and commemoration events, and was nicknamed The Sewöl President by several activists. The dissent increased when in 2016, the press disclosed data framing Pak in several corruption scandals and trust-related felonies. The weekly demonstrations, held every Saturday between November 2016 and January 2017, were mostly performed around the core of the semi-permanent Sewöl commemoration camps in Kwanghwamun Square. Grieving Sewöl parents were among the recurring speakers on the demonstrations, the protesters lit candles that meant both commemoration of the dead and for calls for peaceful demonstrations. As a result, this social movement earned the moniker "candlelight revolution."<sup>18</sup>

Pak stands out in a line of corrupt presidents in South Korea who unlike her—were allowed to maintain their post, though these other corrupt presidents did later face trials for the corruption they sponsored while presidents, such as can be found in, for example, Yi Myŏng-bak.<sup>19</sup> The "special treatment" of Pak's corruption is therefore worth further exploration as a case where public disapproval, as revealed in demonstrations and online discourses, contributed to the legal process of impeachment. Much of the public viewed the impeachment in 2017 as stemming mostly from the delegitimization of President Pak, which was in process ever since the Sewŏl's sinking. The public's satisfaction of her performance as a president declined from 60% in the first year of her term to 34% in the months after the disaster.<sup>20</sup>

Online social media has played an increasingly significant role in Korean politics since 2002.<sup>21</sup> The Sewöl disaster produced extensive online debates and crowd mobilizing projects. It was also the first time that activists felt threatened by using local social media, due to the fact that Pak's government was suspected of illegally supervising the local internet outlets. This was partially proven to be correct when her trial revealed a "black list" of activists, who were denied governmental support for their art installations and other non-protest projects. In such an unstable conspiracy theory environment, many Korean citizens preferred to make use of the non-Korean option that Facebook offered.

### Methodology: Choices, Processes, and Digital Tools

### **General Methodological Choices**

In the disaster's aftermath, social media became an increasingly important venue for expressing ideas, emotions, concerns, dissatisfaction, and advocating for public action.<sup>22</sup> We chose Facebook as the site of our research investigation. This is in line with Song and Son who demonstrated that while Facebook was slow in Korea in the early 2000s, it went on to gain increased momentum, especially from 2014.<sup>23</sup> Indeed, by 2017 36% of Korean social media users referred to it as their most frequently used form of social media. Moreover, Kakao Story was the main venue of 32%, Twitter 13%, and Naver Band possessed only 10% of the users.<sup>24</sup> Thus, analyzing Facebook—rather than, for instance, a Korean based social network platform—is closely related to the specific moment that we wish to explore. While Pak's supporters continued to use Cyworld, Naver, Daum, and Kakao, her opponents increasingly moved to international ones, such as Facebook. This trend is validated most significantly by the fact that the three presidential candidates after Pak's impeachment used Facebook intensively in the 2017 elections.

Scraping Facebook and archiving the posts proved a methodological challenge. While Facebook offers some services in regard to data selling, they did not agree to provide us with full Facebook walls that included reactions and comments. Moreover, they stated that not all the posts would be necessarily included. As a result, we decided to manually archive the posts that we would use, thus creating our own database with the help of research assistants. We were also ethically prohibited from scraping pages that we were following, but that were not marked *public*. These concerns limited our ability to analyze many Facebook walls, as well as all the mentions of Sewŏl on the Facebook platform.

On a practical level, there are challenges in researching the sheer amount of material, the number of participants, and the assessment of emotional content. If we accept that the basic textual unit in Facebook is a post, the need to select key posts for deep analysis becomes a major concern. Facebook posts are also distinguished from traditional corpora of public discourse by the fact that they allow for interaction with the audience via several routes. In order to avoid our own biases, we have developed a two-tier approach to our analysis. The first tier used quantitative methods from the social sciences and digital humanities, which were designed to map the discourse and point us to key posts, as well as to the topics discussed in the process. We chose not to use sentiment analysis due to the various related issues that it raises, especially when used in Korean.<sup>25</sup> In the second tier, we used traditional qualitative critical discourse analysis to better expose the intentions and social interactions promoted by the selected posts. In the initial investigation, we archived and surveyed the Facebook activity of several

bereaved parents, organizations, and the three leading candidates in the 2017 elections. In this manner, we encompassed private individuals, non-government organizations, and political figures. We also archived the Facebook page of President Pak herself, although the page was rarely used for discussing the painful debates around the disaster.

In the Sewöl Facebook discourse before the impeachment, we chose to focus on three active Facebook accounts that belonged to central actors in the activist circles as we knew them from the ethnography of the protest camp. Facebook archiving was a demanding task, as explained above, and we could not expand our exploration to all the related Facebook pages. These three specific accounts were chosen to analyze how different scopes and agendas of online political activities were related to their positioning in relation to the tragedy. The closest to the tragedy is the Facebook page called Yumin-Appa, created by a bereaved father of a drowned student. The most distant one represents the politician Mun Chae-in. In between there is the Facebook page called Kwanghwamun-TV, which is of a volunteer organization that has supported the bereaved parents and the protest movement from its inception in 2014.

In order to compare the political discourse of politicians, we also archived and analyzed the walls of the three leading presidential candidates in the impeachment aftermath. We archived thousands of posts on these five accounts (Mun was a protest activist and a politician at the same time) from the disaster on April 16, 2014, until the presidential elections in May 2017. In the quantitative inquiries we asked what was written and when. In the qualitative layer, we asked why certain posts proved as affect-creating ones, and what was their content and form. Affect was determined according to the reactions of the readers. The analysis included only textual renderings of content, while visual Facebook posts will be analyzed in a separate article.

In the next sections, we elaborate on the details of our research process in order to create a type of guide with important terminology and tools that could prove useful for researchers who are interested in pursuing similar projects. In working with the methodologies that we chose, several obstacles appeared and many decisions had to be made. Moreover, working with Korean, which is a language that possesses unique grammatical and linguistic features that have not been necessarily addressed in existing codes, proved challenging in several ways.

### **Cleaning and Preprocessing the Posts**

In the corpus that we archived, we had several thousand Facebook posts that required preprocessing, translation, and close attention when prepared as data for digital analysis.<sup>26</sup> We cleaned non-readable characters, including images, bullet points, and unread signs (such as the non-breaking space). Individual posts were then converted to utf-8. In order to allow quick access in the future, we named individual files with their date and their serial number within that date.

We neither stemmed nor lemmatized the text (e.g., the reduction of initials and finals, such as the grammatical markers used in Korean). This is because the untreated texts provided an additional value in the form of part-of-speech particles, as well as verb conjugation (which hint something in regard to the texture of the language used).

### Topic Modeling (Finding "What" is Said in the Posts We Analyze)

Statistically based techniques of textual analysis help to avoid bias in the selection of evidence from the text. This does not necessarily contradict traditional modes of interrogation, but rather complements them. Joris Van Zundert addresses the seemingly contradictory nature of hermeneutics and the scientific empirical paradigm that is the basis for automatic text analysis. Moreover, he proposes a cognizant dialogue between the two in order to create what he calls "humanities-informed hermeneutics of code."<sup>27</sup> While the distinction between "supervised" and "unsupervised" learning is sometimes blurred with many overlapping areas, it seems that, currently, we see unsupervised methods discussed as *data mining*, while the term *machine learning* is applied more often to supervised learning. The terms are by no means absolute, as Jockers and Underwood have noted.<sup>28</sup> We use the term *unsupervised learning* to indicate that the procedure did not involve a process of classification prior to the analysis.

The main advantage of unsupervised methods is that they make no assumptions about the target terms or the research hypothesis. As such, they can provide a relatively objective way to monitor the corpus. As the debate on the Sewŏl responses was conducted largely online, we searched for methods to better analyze the large corpora of texts, without their exact contextual aspects. LDA has been used in digital linguistic anthropology and was the best method we found for this exploration. Traditional literary methodologies, such as close reading, fail to address social media properly for two reasons. First, the sheer amount of information makes it difficult to locate and isolate key texts for close inspection. Second, it is more difficult for a human reader to find a truly consistent topic in multiple texts that are short, inconsistent, and heterogenous. We have selected topic modeling as a way to bypass these two problems, as well as to indicate keywords and topics that are consistent in a measurable way. In doing this, we can then employ traditional approaches on the corpus with an added quantitative value. Our selected methodology—topic modeling—is a form of unsupervised distant reading of a text. The algorithm used (LDA) employs a generative statistical model to analyze a set of observations (i.e., the text provided) in order to expose latent patterns of regularly co-occurring terms, which are called topics.<sup>29</sup>

Statistically based techniques of textual analysis, and particularly LDA, are increasingly prominent in the ongoing research. In part, this is due to the fact that these methods allow analysis of large-scale corpora through quantitative measures. Nan Zhang Da has argued that there is a fundamental mismatch between statistical tools and the way we use them in cultural studies. Specifically, Nan discussed a series of studies using LDA in order to show that these are very sensitive to parametrization. Furthermore, algorithms tend to cluster topics based on time consecutive texts, which naturally yield topics that increase and decrease over time. Repeating some of these studies yielded results that were similar, but not the same as the original study. Nan summarized that without a specific application in mind, LDA tend to point at the most obvious conclusions, while making it hard to focus on the real latent topics of the corpus.<sup>30</sup> Haeyoung Lee et al., used a Korean-language Twitter corpus on dementia to statistically compare the topics generated with LDA vis à vis manual tagging; furthermore, they found that LDA was quite effective for this type of study.<sup>31</sup> With these considerations in mind, we have followed the example of Slingerland et al. and used LDA in order to achieve two goals.<sup>32</sup> The first was to quickly analyze large unknown corpora, and the second was to avoid our own biases. We have selected keywords for the appropriate topics in order to find periods of peak activity.<sup>33</sup> We double checked the frequency of the keywords that were repeated in many of the topics on the walls. The posts that were most reacted to and shared in the peak period were selected for close reading.

The topics are provided in the form of a list of words and weights. The term "distant reading" does not refer in this case to physical proximity, but rather to an approach in textual analysis, which relies on computation methods as opposed to "close reading." This approach was first suggested in 2005 in Franco Moretti's groundbreaking book *Graph*, *Maps*, *Trees.*<sup>34</sup> We

used the LDA model of the GENSIM library, an open source library used extensively in academic works.<sup>35</sup> This library, as well as all the other code used for this study, was written in Python. The number of topics (*k*) was selected using Gensim's coherence model (i.e., analyzing 1–50 topics and then obtaining an analysis of the best coherence ranking). We saw no significant improvement beyond 10 topics, which corresponds well with the spurious nature of Facebook texts, being of different lengths and styles. We chose not to interpret the most frequent topics by giving them names that connect the words the algorithm had put together. For example, if we titled a topic "The president is responsible for finding the missing passengers," we impose our general knowledge of the discourse by connecting the nouns in a certain manner. Instead of this approach, we compared the ten most recurring topics of each wall and then found clear distinctions between the manners of discussing the disaster. The topics were also clearly different from mere frequent words, and offered other insights.

## Topic Frequencies by Date (Finding "When" and "How Much" Each Topic is Mentioned)

Based on the topics that came up through the LDA analysis, we selected a few keywords. We then constructed a histogram of their appearance, based on code of our own development. We used these histograms to further assert the key periods of increased activity, as well as to help choose possible texts for the second tier of a qualitative analysis. While there are other ways to identify key texts within the corpus (since most LDA implementations also provide a mapping of texts to topics), this helped to enhance the temporal aspect of our query and possibly help to correlate those periods of increased activity with political, and other, events.

Although we initially composed a detailed list of events correlating with both the Sewŏl disaster and the protests of 2016, the posts themselves proved adequate enough to identify their context. In other words, if topic modeling provided us with the text, finding topic frequencies and their dating provided us with the context. Finally, translation and close reading of selected posts provided us with the texture needed to properly read the events.

### Close Reading of Selected Texts (Finding "Why" Each Topic is Used)

Statistical analysis of a text is not sufficient for the deeper understanding that close reading can provide, but it can augment and direct the effort of

traditional analysis.<sup>36</sup> Posts for close analysis were selected from the peak periods of the keyword graphs. While we acknowledge the importance of the differences between the three main social participation modes that Facebook provides—namely likes, shares, and comments—we were able to analyze only a few of the extensive comment lists on the posts. As commenting on a post requires more involvement than sharing, or in pressing the *like* button, we took the number of comments as an indicator of the affective impact of a specific post. Further, we chose the subjects for close reading mostly posts in the peak periods of a topic's appearance that yielded more comments than others.

# Findings: Affective Strategies of Politicizing the Sewŏl Disaster on Facebook

Our research uncovered that the strategies of using social networks to politicize the mourning was affected by the social positioning of each Facebook account in the Sewöl-related public sphere. We found clear differences in the manners in which each Facebook page discussed the disaster in order to accentuate the emotions created by this socio-historical event. This ranged from delegitimizing the president, expressing social solidarity, and attempts to gain voters' support during the 2017 presidential elections. We divided our findings into categories that fit both our experience during the ethnography in the activists' camp, as well as the most outstanding trends in the Facebook discourse: (1) using massmourning for political goals; (2) discussing the moral and emotional aspects of Pak's actions; (3) responding to specific events in a politicized tone; (4) discussing the Sewöl disaster in the context of the 2017 presidential elections. In each category we begin by describing the quantitative findings, then we use qualitative close reading of specific posts in order to demonstrate and explain how the topics discussed and the terms used were manifested in the texts.

### Using Mass-Mourning for Political Goals

Pak Kŭn-hye was missing from the public's eye, and apparently from administrative meetings, for at least 7 hours after the sinking's first reports. The "missing seven hours" were extensively discussed by the protesters and their organizations. We found 28 posts discussing it on the page of Yumin-Appa between April 2015 and August 2018, of which some

received thousands of likes and hundreds of comments (most notably one from December 12, 2016, which received 4000 likes and 895 comments). In comparison, we could not find any comment or explanation on the topic on Pak Kün-hye's Facebook page, nor on her official Twitter account (@GH PARK). On Yumin-Appa's wall, the president's full name was mentioned in seven of the ten most recurrent topics. His deceased daughter's name appeared only in one, whilst he is discussing his general appeal for the Sewol cause, rather than as an individual plea. Nevertheless, the term *disaster* (ch'amsa) appeared in seven topics. News (nyusu) or reporter (kija) appeared in 6 topics. The bereaved father discussed the president in relation to his personal grieving but did not necessarily relate to other passengers' death. He perceived the media as an important venue to pressure the president to move toward discovering what had led to the tragic death toll. This was in addition to addressing the president by her name and not by title; both of these facts resulted in the father of the deceased daughter transforming the discourse into a more personal accusation.

On the Kwanghwamun-TV Facebook wall all the topics contained the name of the ferry and *disaster*. Eight topics included the word *president* but, in contrast to Yumin-Appa's page, only two mentioned her by name. Another distinction between the two pages is that here six of the topics included the word *misusupcha*, which in the Sewöl-related discourse meant the missing passengers, who were absent from the topics of Yumin-Appa. Only two topics included *news*. Moreover, we can deduct that the topics suggest tying the president's responsibility with the disaster and the missing passengers. The grief and mass mourning were politicized mainly in relation to Pak and her role as president.

Similar to the bereaved father, the politician Mun used Pak's name in all ten topics of his posts that mentioned Sewöl. Unlike the other walls discussed above, seven of his topics included the term *new* (*seroun*), suggesting criticism of the current situation and the need to find new manners to treat such a disaster. Moreover, the term *now* appeared in seven of the topics, suggesting that he was calling for action, implying that Pak must initiate a change in policy. In contrast with the other walls, the word *disaster* did not appear in his topics, whereas terms for "the people" (*minjogin*, *simin*, *kungmin*, *taehan-min'guk*) appeared in all ten topics, suggesting that he tied Pak's failure with general national concerns.

Close readings of selected posts by the three accounts revealed similar intentions and tendencies. Kwanghwamun-TV launched a campaign called *The Birthday Videos*, where they prepared individual videos for each

drowned student and uploaded it to the Facebook page on the actual birthday of the deceased. These fifteen-minute videos combined childhood photographs, poetry, and photographs of the protests. The message of this project was articulated reflectively during interviews with members of the video production team. They wanted to create a constant, almost daily reminder of the many dead in order to urge the public to take political action. They also felt that as the videos were broadly distributed and shared, the bereaved families received increased support during their pleas to the government. Yumin-Appa also discussed his deceased daughter's birthday, uploading emotional text and photographs of the birthday altar that he prepared for her on such occasions, where there was a decorated cake and lit candles displayed underneath her photograph in a black frame. On April 24, 2015, he posted a personal letter to her, where he promised to keep acting in the protest camp until a proper investigation of her death is achieved. This post yielded more than 2,000 likes, was shared 43 times, and received about 100 comments.

Mun discussed his emotions toward the Sewöl tragedy by criticizing the president for her feeble response. For example, after the aforementioned Pak's "tear speech," he wrote on his wall a Special Statement on May 20, 2014:

The Sewŏl disaster is a tragedy in which innocent lives were lost because of the country's incompetence and irresponsibility. In order for this innocent sacrifice to not be in vain, South Korea must change itself. It is the only way to appease the victims. The president must change herself. I thought that the president's talk would be the trigger, but it only disappointed me.

As in other similar posts, Mun criticized Pak not only in relation to the feeble government that was responsible for the magnitude of the disaster, but also for her distanced attitude toward the Korean public and the suffering of the victims' families. In the post he chose a very affective speech-form, discussing the "innocent lives" that were lost, asserting the need "to appease the victims," as well as stating his personal disappointment in Pak.

### Discussing Morals and Emotional Aspects of Pak's Actions

The topic analysis of the three walls revealed that the usage of terms related to morals and values varied extensively. Yumin-Appa had moral values in 8 out of the 10 most recurring topics. The values he discussed most were

*truth (chinsil)* and *life (saengmyŏng)*. Each of these two values appeared in five topics, sometimes together, and in most cases close to the name of President Pak. *Respect (chonjung)* and *safe (anjŏnhan)* appeared in one topic each. In this manner, the bereaved father expanded the discourse of his personal mourning to broader social issues, as well as connected that with the failure of Pak to stand for the values that he, and many other Koreans, cherished. Such terminology did not appear at all in Kwanghwamun-TV's topics. The only terms that referred somewhat to values were *us/our (uri)*, *the people (kungmin)*, and *all our friends (ch'ingudũl)*, which all relate to solidarity. Most of the other words in the topics were related to specific actions that they urged the government to take, such as finding the missing passengers and salvaging the wreck for the purposes of investigation. Mun, as is common in Korean politicians' rhetoric, used *the people (kungmin)* in eight out of the ten topics. Similar to the activists' organization he related this term to unitedness and solidarity.

Each actor was interested in different moral aspects: Yumin-Appa emphasized transparency, humanity, and trustworthiness that were related to the supposed cover-up of the disaster by corrupt officials; the activist group delved on social support; and Mun Chae-in was interested in national unity. While we also expected this discourse to be reflected in emotion terms, we found none of these in the main topic analysis.

Whereas many posts that we read conveyed emotions, whether it is grief, anger, or hope, we did not see any emotions in the LDA topic-words. In the context of this study, it means that no word of emotion was statistically significant enough, or close enough, to other recurring terms in order to be incorporated in a topic. Nevertheless, all three walls used negatives in almost every topic. This can be interpreted as a general disapproval of the manners in which the crisis had been handled and this from all perspectives: operational, emotional, and moral.

Some of these posts had an important story to tell, as shown above in relation to Mun's reaction to the "tear speech." His manner of emotion iteration stands in sharp contrast with the reserved and formal speechform used by Pak in her only Sewöl related post from April 29, 2014, which reads "I would like to give my most sincere condolences to the sad families, relatives and friends who lost [their dear ones] and suffered greatly." The president did not express her emotions or refer to her own suffering as a result of the situation until two weeks after the tragedy. She mainly delivered formal condolences. Likewise, her supporters who were interviewed around the Kwanghwamun protest camp often said that a president could not relate to each death that happened in a population of



Fig. 1. Pak Kün-hye's post from April 29, 2014.

millions. They supported her detachment from the emotional stirring that the sinking had on society as a whole. This stance could be also gauged from the responses to Pak's aforementioned condolences post.

When we analyzed the 3884 comments to this post using our topic modeling system, it disclosed that most commentators were Pak's supporters. The word *Senöl* was mentioned only in one topic and then only in 136 of the comments, which means that less than 4% of the comments used the word that is specifically related to the post.<sup>37</sup> Only one topic discussed grief using the word *tears (nunmul)*. The other emotions expressed within the ten most recurrent topics were *cheer-up (him naeseyo)* and *well (chal/ chohŭn)*. Such commentator Young-Woong Choi says, "For Heaven sake, be strong and please do the best to end this trouble quickly." Another interesting feature was that all the topics included reference to *the nation*, or *the people (kungmin/taehan minguk*), showing that the posts were politicized rather than personal or related to the deaths that resulted from the disaster.<sup>38</sup>

### Responding to Particular Events in a Politicized Tone

In order to analyze how the three Facebook walls reflected the various responses to the specific actions of President Pak, we created a timeline that showed when her name and/or title *President (taet'ongnyŏng)* were most frequently mentioned together with *Senŏl*. These keywords were significant in the topic list and we wanted to check when they were most frequent in the different walls. Although a partial representation, the timeline shows

how the words peak at certain times in a synchronized way, which we have correlated with actual events.

As shown in the Figure 2 diagram, there are three major peaks, which are December 2014–January 2015, October–December 2015, and November–December of 2016. The first peak was related to the trials of the ferry crew members, which delivered verdicts in November 2014. The trials restirred the public's emotion, which, for many, had subsided six months after the sinking. Many of the activists thought that punishing the ferry's crew was not enough. This was because the operation of the ferry was conducted according to flawed regulations that were allowed under the current and previous regimes. Moreover, President Pak had not apologized personally for the scope of the disaster, nor did she contact the bereaved families directly. The activists started to point toward her and the administration as the ones who should have to face thorough critical scrutiny.

The first post by Kwanghwamun-TV that mentioned Pak and Sewöl together is from December 19th, 2014. The post advertised a protest against the president. This was a moment when the Sewöl protest began to be politicized by relating the reasons to the disaster with other governmental and presidential malfunctions, such as the pension crisis, the tensions between North and South Korea, and labor rights issues. The most significant peak, where all three Facebook pages mention both Pak and Sewöl to a greater extent was in November 2016, when the Choi Sunsil scandal erupted. This was also when the mass protests in downtown Seoul began to take shape into regular Saturday evening events, which

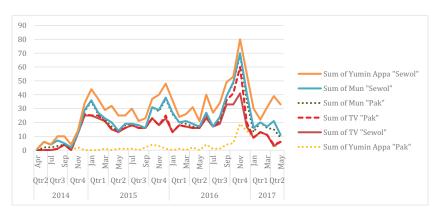


Fig. 2. Mentions of the President and the Sewol over time in the three walls.

culminated in an estimated participation of two million protesters calling for Pak's impeachment.

During November–December 2016, many posts accused President Pak of corruption leading to the Sewöl mass death. For example, there was a post shared by Kwanghwamun-TV on November 1st, 2016 that related to a recording of an official who stated that Pak passed a sports reform one day after the sinking, where she intended on helping her friend, Choi's daughter, to enter the prestigious Ehwa University. This demonstrated that she was busier helping her friends than saving the trapped passengers on the sinking vessel. Another post from the same day lists the activists' demands of the president including: revealing what happened during the "missing seven hours"; investigating the role the NIS in the ferry's handling; acknowledging unlawful destruction of evidence; establishing a strong investigation committee; and apologizing to the victims' families.

Additional smaller peaks, such as the one around February 2017 are also evident. It is easy to see that all three authors were synchronized on this matter. Other peaks of activity are not so clear cut. For example, in June 2016 most of the posts discussing the president were about the law for a special investigation committee, which returned to the public eye after a book published on Tanwŏn school invoked news reports about the commemoration. The last peak, in April 2017, was related to the proximity of the final impeachment and the anniversary of the sinking.

Some peaks occurred in relation to news featuring Pak outside the Sewöl discourse. On January 8, 2015, for example, Mun's posts on Pak focused on the inter-Korean summit, farming crisis, and other internal issues, while Kwanghwamun-TV's posts discussed the Sewöl disaster. In general, most of the posts discussing concrete actions related to the disaster were by Kwanghwamun-TV.

While thinking of the temporal dimensions of the crisis and its politicization, the words *now* (*chigum*) and *new* (*saeroun*) (which occurred in eight and nine of Muns' topics (respectively) call for interpretation). These did not appear at all in the other two walls, which implies that it was a part of the politician's discourse and related to his position as the opposition leader. His usage of the Sewŏl event to criticize what was happening in his country opened some opportunities to suggest new and different administrative strategies. These, combined with the extensive usage of collective terms (*uri*, *sarami*, *modun*, and *kunmin*) in seven of the topics, show how Mun diverted the general commemoration inclinations into more concrete agendas and plans.

### Discussing the Sewol in the 2017 Presidential Elections

Following Pak's impeachment by the constitutional court on March 10th, 2017, the presidential elections were rescheduled to May 9th, 2017.<sup>39</sup> The three leading runners were Mun Chae-in of the Democratic party (*tobulo minjudang*), Hong Chun-p'yo of Liberty Korea (*chayu han'gukdan*), and An Ch'öl-su of the People's Party (*kungmin-ŭi dan*).<sup>40</sup> Mun was elected in the largest open primary in Korean history. He was also the polls' leading runner and the most active in social media. He had politicized the disaster even before the impeachment.<sup>41</sup> Similarly, the right-wing leaders also politicized the event.<sup>42</sup> The liberal An Ch'öl-su incorporated the discussion on the disaster into his campaign, promising to "make a nation that regards life and safety as top-priority".<sup>43</sup> In contrast, the conservative Hong Chun-p'yo, often styled as a "Korean Donald Trump," was rebuked for dismissing the incident.

These three leading figures show similar engagement on Facebook. In examining their activities in 2017 leading to the elections in May, we find An Ch'ŏl-su with 473 posts, of which only 13 mentioned the Sewŏl disaster; Hong Chun-p'yo posted 396 times (although he only started using Facebook in March), of which only 4 posts discussed the event; and, finally, Mun Chae-in uploaded 475 posts from the beginning of 2017 alone, of which 13 posts discussed the Sewŏl, and were notably much lengthier than the other candidates. Before the election campaign, Mun mentioned the ferry disaster in 54 separate posts, showing that he politicized the disaster from its inception.

The differences between the three candidates were not only a matter of quantity, but also of quality and intention. An's first post on the topic, from December 7, 2016, was laconic and contained a single line, stating that Pak's impeachment was not related to the disaster. That single line received 561 reactions, suggesting that An was targeting a public of Pak's supporters, whom he addressed in a manner that created the desired effect. His following posts on the topic were sparse and stressed that the issue was not political. The first extensive post about the Sewöl that An published was on the 1000 days anniversary of the disaster, on January 9, 2017. That post was indeed emotional and evocative, in it An stated clearly that "We will investigate the truth of the Sewöl ferry disaster and identify who was in charge." Similar to An's other posts, this one received more than five hundred reactions and dozens of comments, indicating that it was well timed.

Hong's first post on the topic from March 23, 2017, was a response to the lifting of the hull from sea, which received only 20 reactions. This can

be interpreted as a sign of his audience's disinterest. He used emotional words, calling the incident a "heartbreaking maritime accident," but avoided words similar to *disaster*. Similar to An, he expressed his wish that the incident would not become political. A post from May 3 read, "While the grieving parents have been mourning for three years, Mun has been utilizing the unfair deaths of students in the Sewŏl Ferry Disaster for political gain."

The most engaging post on the disaster during the election campaign was Mun's post on the 1000-day anniversary in January 2017, which received almost 7000 reactions, 241 comments, and 392 shares. The post itself was significantly more complex in rhetoric than the ones his opponents posted. Further, the audience may have been larger, as his followers tended to use Facebook more than those of his opponents. It generated affect by utilizing emotionally laden words. This was found in sayings such as "the pain of the family of the Sewol ferry is the pain of Korea," as well as stating that the families had been facing oblivion for 1000 days. Mun also referred to material symbols, such as 10 million candles, which stood for the number of signatures on the petition to investigate the disaster. In this manner, he linked the sinking's anniversary with activism in relation to social concerns for safety, corruption control, and related legislation. Mun utilized the emotional introductions in order to discuss political ends, reminding the readers that "The main culprits behind the sinking of the Sewöl ferry are the forces that have used injustice and privilege to scare and deceive the people." In this statement, Mun evoked the public's fear that the political and economic elites had been joining efforts to create more personal capital on the backs of the general public. In this manner, he was posing the subversive suggestion that Pak failed to safeguard the wellbeing of the people for her political and financial ends.

While Mun consistently referred to the disaster from its inception in 2014, An's and Hong's politicization of the disaster appeared only after the impeachment had been decided and as a part of their presidential campaign. Before the turn of events was clear, they were much more cautious about implicating President Pak directly. It was different for Mun, who was the leader of the political opposition throughout the entire progress of the disaster's discourse. Politicization of the disaster continued after the impeachment, also by the activists. Most notoriously among the Facebook walls that we analyzed, Yumin-Appa directed his pleas for justice to the voters by reminding them that the goal of proper investigation had not been immediately achieved with Pak's impeachment.

In the day before the presidential elections, Yumin-Appa wrote "Be sure to vote for the Sewöl ferry! Revealing the truth of the Sewöl ferry depends on who is the president." This post received 1900 reactions, 76 comments, and 147 shares. These numbers matched parallel engagements with the politicians An and Mun on the same days, which vielded a few thousand of direct acts. The post did not mention Mun, Hong, or An explicitly, but was a commanding demand that the public think and feel their grief about the Sewol when voting. The photos in this post are of himself during the hunger strike of 2014, which had made him a public figure in the first place. Within a few days, when Mun's election was announced, Yumin-Appa posted photos of Mun sitting with him during the aforementioned hunger strike and during the years of protesting in Kwanghwamun square, together with a text congratulating Mun as the future president. He reminded the public that Mun was an avid supporter of the Sewol pleas from their inception. Evidently, such direct political support before the election was avoided, for fear of being tagged as a Mun supporter in case another candidate wins. His goal was promoting the Sewöl investigation rather than helping any specific president-to-be.

# Conclusion

Affective politicization of the Sewol disaster appeared on the Facebook walls of the bereaved families, activist groups, and politicians without the extensive use of emotion terms-which did not appear at all in our LDA topic lists, but was evident in the close readings of the popular posts. This finding demonstrates that using only digital tools, without analyzing the content of the texts explored, may lead to misleading conclusions. Moreover, a combined methodology of frequency search and topic modeling proved useful to discern both the most recurrent terminology, as well as the emerging issues that were discussed. This combination also highlighted the manners in which each agent in the process chose formal/ informal, affective/practical, and sophisticated/heartfelt discourse patterns. The extensive usage of Facebook for political purposes during this crisis, even by conservative candidates-but not by then President Pakshows its emergence as a central social medium in South Korea. Topic modeling was more useful in the case of Korean than n-grams (where a few words that appear in close proximity are sought). This is because, in Korean, sentences are usually long and the verb appears towards the end, making it undetectable in tandem with the subject of the sentence.

We found that each of the explored Facebook walls related to the tragedy in manners that were connected to the aims and scope of the specific actors' social media activity. The terms that each actor used were unique to their wall and different from the terms common in all pages, such as president, Sewöl, and negations. Each wall showed a different linguistic tendency. While the only wall that used Sewol-related terms extensively was Kwanghwamun-TV, Mun's pattern included an emphasis on the need for new kinds of actions and changes. Both Mun and the activists used collective terminology, which did not appear in texts by the bereaved father. Collective versus personal mourning was thus an evident distinction between the father and the other actors. The father was the only one who extensively employed terms related to morality and values, such as *truth*. In his specific style, the father used emphasis most often, which is a marker of less sophisticated speech and shows the authenticity of the writer as a simple person that speaks from his heart.

Within the theoretical insights that the analysis unveiled, the most outstanding is that there are hierarchies of sorrow. Some people are more central to the commemoration project at certain points of the process, while others arise later. The bereaved father gained much online support in the months directly following the disaster. However, while during the politicized anti-Pak movement, the activists and presidency candidates came to the fore in the discussion of the disaster's aftermath and its political implications. This is because different agents manipulate affect in social media for practical/political goals in diverse manners. The personal grief was important for the initial mobilization of the public, but the longlasting stand of the protests rested on intervention by more remote agents in the course of the disaster's emotional impact production.

The disaster had the most direct impact on the bereaved parents, thus they were at the top of the sorrow hierarchy. Their place as leading in the emotional appeal to the public was manifested not only online, but also when they were invited to lead anti-Pak rallies, as well as being interviewed in the media about their resentment toward her. Second in this hierarchy were the social activists, who manned the protest camp downtown and operated the Kwanghwamun-TV Facebook page. Most of them were not relatives of the victims but became emotionally involved in the politicized commemorative project after close contact with the parents. Last in the hierarchy were the politicians, whose emotional appeals to the public in relation to the disaster were always tainted with their own political aspirations. President Pak refrained from expressing deep sorrow throughout the disaster and its aftermath; in addition, this attitude was also clear in her Facebook mentions of it.

We have not found any research that compares different Facebook accounts, in such a way as has been performed here. Most of the work on the Sewöl tragedy in the Korean language discussed the practical aspects of the malfunctioning shipping regulations, as well as how problems resulting from political and societal conditions in general had led to the tragedy. However, there has not been much research work written about the politicization of the disaster or the discourse about it.<sup>44</sup> Further research on other social networks used in Korea can shed light on different kinds of users and usages. Moreover, it would also be particularly revealing to compare the politicization of the Sewŏl and other disasters with social concerns in the recent elections of 2022.

### Notes

1. Liora Sarfati and Bora Chung, "Affective Protest Symbols: Public Dissent in the Mass Commemoration of the Sewol Ferry's Victims in Seoul," *Asian Studies Review* 42, no. 4 (2018): 565–85.

2. Stefan Jänicke, Greta Franzini, Muhammad F. Cheema, and Gerik Scheuermann, "Visual Text Analysis in Digital Humanities: Visual Text Analysis in Digital Humanities," *Computer Graphics Forum* 36, no. 7 (2017): 226–50.

3. Daniel Halpern and Jennifer Gibbs, "Social Media as a Catalyst for Online Deliberation? Exploring the Affordances of Facebook and YouTube for Political Expression," *Computers in Human Behavior* 29, no. 3 (2013): 1159–68.

4. M. Willis Monroe, "Using Quantitative Methods for Measuring Inter-Textual Relations in Cuneiform," in *CyberResearch on the Ancient Near East and Neighboring Regions*, ed. Vanessa Bigot Juloux et al. (London: Brill, 2018), 257–81.

5. Robert I. Ogie et al., "Social Media use in Disaster Recovery: A Systematic Literature Review," *International Journal of Disaster Risk Reduction* 70 (2022): 1–18.

6. Marlon I. Diaz et al., "The Politicization of Ivermectin Tweets during the COVID-19 Pandemic," *Open Forum Infectious Diseases* 9, no. 7 (2022): 1–5; Olessia Koltsova and Sergei Koltcov, "Mapping the Public Agenda with Topic Modeling: The Case of the Russian Live Journal," *Policy & Internet* 5, no. 2 (2013): 207–27; Annett Heft et al., "Transnational Issue Agendas of the Radical Right? Parties' Facebook Campaign Communication in Six Countries during the 2019 European Parliament Election," *European Journal of Communication* 38, no. 1 (2023): 22–42.

7. Ún-kyung Yang, Ch'oi Minyŏng, Song Chaesŏng, and Han Kyu-sŏk, "Sewŏlho sagŏn tamronŭi naeyongbunsŏgŭl t'onghan hyŏnsilŭi ihae: sagŏnbalsaeng handalganŭi taŭmagora kŭlbusŏk" [Understanding the Conflict Regarding the Sewŏl Ferry Tragedy: Content Analysis of the Daum Agora for One Month After the Incident], *Proceedings of the Annual Conference of Korean Psychological Association* 1 (2014): 451.

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9. Min-Joon Lee et al., "Machine Learning-Based Data Mining Method for Sentiment Analysis of the Sewol Ferry Disaster's Effect on Social Stress," *Frontiers in Psychiatry* 11 (2020): 1–9.

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11. "Sewölho ch'immol chikjön küpsönhoehaetta... sago wönin 'pyönch'im' kanŭngsöng tõung nop'ajyö" [Sewol Ferry Turned Sharply Before Sinking... Higher Possibility That "Turn" Caused Accident], *Choson Ilbo*, April 17, 2014.

12. For example, the Sŏhae Ferry sank in 1993 with 323 victims.

Jiyeon Kang, "Internet Activism Transforming Street Politics: South Korea's
2008 'Mad Cow' Protests and New Democratic Sensibilities," *Media, Culture & Society* 39, no.
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14. Liora Sarfati and Bora Chung, "Circles of Poetic Grief, Anger, and Hope: Landscapes of Mass Cooperation in Seoul after the Sewöl Disaster," *Journal of Folklore Research* 57, no. 1 (2020): 1–32.

15. "Pak Künhye taet'ongnyöng, sewölho taegungmindamhwa" [President Pak's Speech to People], YTN, May 19, 2014.

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17. "Sewölho t'ŭkpyölböp sihaengnyö' kungmuhŭi kkŭt'nae t'onggwa" ["Sewöl Special Law Decree" Finally Passes Cabinet Meeting], 416 Families, n.d.

 Hocheol Son, Chotbul hyŏngmyŏng kwa 2017 nyŏn cheje: Pak Chŏng-hi, 87 nyŏn, 97 nyŏn cheje rĭul nŏmŏošö [Candlelight Revolution and the System in 2017: Pak Chŏng-hi, after Years 87 and 97] (Seoul: Sogang University Press, 2017).

19. Sangwon Lee, "The Role of Social Media in Protest Participation: The Case of Candlelight Vigils in South Korea," *International Journal of Communication* 12 (2018): 1523–40.

20. "Han'guk Kaerŏng teir'ri op'iniŏn" [Gallup Korea Daily Opinion], Gallup, October 4, 2916.

21. Ronda Hauben, "Rise of Netizen Democracy: A Case Study of Netizens' Impact on Democracy in South Korea," *The Amateur Computerist* 34, no. 2 (2021): 1–53; Jarim Kim, "How Internet Content Mobilizes Protests: The Case of Two Anti-Government Protests in Korea," *Social Science Computer Review* 38, no. 4 (2020): 443–61.

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26. Stefan Jänicke et al., "Visual Text Analysis in Digital Humanities: Visual Text Analysis in Digital Humanities," *Computer Graphics Forum* 36, no. 7 (2017): 226–50.

27. Joris J. Van Zundert, "Screwmeneutics and Hermenumericals: The Computationality of Hermeneutics," in *A Companion to Digital Humanities*, ed. Susan Schreibman, Ray Siemens, and John Unsworth (Oxford: Blackwell Publishing, 2016), 331–47.

28. Matthew L. Jockers and Ted Underwood, "Text-Mining the Humanities," in *A New Companion to Digital Humanities*, ed. Susan Schreibman, Raymond G. Siemens, and John Unsworth (Chichester: John Wiley & Sons, 2015), 292.

29. Megan R. Brett, "Topic Modeling: A Basic Introduction," *Journal of the Digital Humanities* 2, no. 1 (2012).

30. Nan Zhang Da, "The Computational Case Against Computational Literary Studies," *Critical Inquiry* 45, no. 3 (2019): 601–39.

31. Haeyoung Lee et al., "Comparing Themes Extracted via Topic Modeling and Manual Content Analysis: Korean-Language Discussions of Dementia on Twitter," *Studies in Health Technology and Informatics* 295 (2022): 230–3.

32. Edward Slingerland et al., "The Distant Reading of Religious Texts: A 'Big Data' Approach to Mind-Body Concepts in Early China," *Journal of the American Academy of Religion* 85, no. 4 (2017), 985–1016.

33. Because of the short and sporadic nature of Facebook posts, surveying topics over posts did not yield a coherent picture, whereas specific keywords helped us focus on dense and longer posts. Keywords were selected according to relative importance and recurrence within the topics.

34. Brett, "Topic Modeling."

35. Radim Rehurek and Petr Sojka, "Software Framework for Topic Modelling with Large Corpora," in *Proceedings of the LREC 2010 Workshop on New Challenges for NLP Frameworks* (Valletta: Malta, 2010).

36. Slingerland et al., 4.

37. The comment analysis will be performed in a separate article. In regard to this particular post by President Pak, the analysis was performed only to emphasize the discursive characteristics of the medium.

38. Interestingly, several hundreds of the posts were in Chinese, English, and Thai, which hints to the interest that President Pak ignited in foreign audiences, or in regard to foreign residents in Korea. See Figure 1.

39. Jamie Doucette, "The Occult of Personality: Korea's Candlelight Protests and the Impeachment of Pak Geun-hye," *The Journal of Asian Studies* 76, no. 4 (2017): 851–60.

40. Among the other registered candidates, it is worth mentioning Sim Sang-jong of the Justice Party (chong-ui dan), who was the only woman running.

41. "Tanshing nongsönghaettön munjaein, sön'gö tangil Sewölho cheisyuhwa" [Mun, Who Joined the Hunger Strike, Revisits Sewöl Issue on By-Election Day], *Choson Ilbo*, April 29, 2015.

42. "Sewölho t'ahyöp twijimnün kanggyöngp'ae kküllyögamyön yadang tto manghanda" [Opposition Will Fail Again if Dragged Down by Anti-Sewöl Radicals], *Dong-A Ilbo*, August 9, 2014.

43. Chi-in Hong, "An Ch'ŏlsu 'sewŏrho ch'amsa, kkŭtkkaji chinsil palkhigo ch'aegimjige hal kŏt" [An Ch'ŏl-su 'I Will Reveal the Truth and Take Responsibility for the Sewol Ferry Disaster'], *Yonhap News*, April 16, 2017.

44. For a discussion of more than 1000 articles in Korean about the disaster, see Sarfati and Chung, "Affective Protest Symbols," 569.

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