Facts or Opinions? Making Sense through Social Media

Completed Research

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Abstract

In Guatemala, a growing public sphere powerfully fueled by social media has begun to forge a culture of zero tolerance towards impunity. In the last years, several organizations have relied heavily on social media for alerting the citizens when they detect actions by the government that go against the public interest. We focus on content in social media that enable citizens to understand how dysfunctional state institutions affect their everyday life. We engaged in a qualitative study using Twitter data in the context of a Guatemalan tragedy where 41 girls lost their lives while living in a state-run care home. We found that different types of content turned the events surrounding the tragedy into circumstances that are easily comprehended by the general public. In this way, social media expanded shared awareness on the failure of the home to fulfill its responsibilities by highlighting the causes and culprits of the tragedy.

Keywords

Social Media, Sensemaking, Discourse Analysis, Public Sphere, Guatemala.

Introduction

Since the rise of the Internet in the early 1990s, information and communication technologies have been recognized as an important catalyst for social transformation. As social media become a fact of life for the civil society, we have witnessed how websites like Twitter and Facebook empower individuals and organizations to raise awareness and promote causes of political change. In developing countries, users of social media are gaining access to information, more opportunities to engage in public speech, and an enhanced ability to undertake collective action (Shirky 2011).

In the political arena, social media has enabled expressions of political dissent and protests against governments to become massive, global and frequent. Guatemala, The Philippines, Egypt, and Moldova are just some of the many countries where social media has helped to coordinate massive mobilizations in response to ill-disposed actions by national leaders. The impact of social media on coordinating these popular protests has been surprising: On January 2001, a massive protest arranged mainly by text messages created the conditions for Philippine President Joseph Estrada to be impeached, marking the first time that social media had helped force out a national leader (Shirky 2011). More recently, in 2015, an investigation carried out by state prosecutors in Guatemala disclosed a complex network of corruption led by the Guatemalan president who defrauded the state for millions of dollars (Daugherty 2015). The public announcement of the investigation triggered a series of unprecedented crowd protests organized and spurred on via social media websites. Similarly to the fate of the Philippine president, the Guatemalan president resigned on September 1, 2015, after a massive protest by more than 200,000 Guatemalans at the Plaza of the Constitution in Guatemala City.

Although the stories of ousted presidents have led observers to focus on the power of mass protests to topple governments, the potential of social media lies mainly in supporting civil society and the public sphere (Shirky 2011). The public sphere refers to an area in social life where citizens are free to deliberate about matters of mutual interest and, if possible, reach a common judgment about them (Hauser 1998). Note that this area is independent of the state, allowing the production and circulation of discourses that can in principle be critical of the state (Fraser 1990).
“Little political change happens without the dissemination and adoption of ideas and opinions in the public sphere” (Shirky 2011, p. 35). Furthermore, a public sphere is more likely to emerge in a society as a result of people’s dissatisfaction with state institutions or day-to-day governance than from their embrace of abstract political ideas. Let me give you an example, nowadays many governments in Latin America are more in danger of being overturned by populations becoming less tolerant to corruption and impunity than by the adherence to ideologies in the left-right political spectrum.

Recently in Latin America, Guatemala has been an example of the arduous fight against impunity and violations of human rights through strengthening its judiciary system (HRW 2018). In this struggle, the diffusion of information and opinions that account for offenses committed by public authorities has been crucial in engaging the citizenry with the political challenges of Guatemala. Undoubtedly, a growing public sphere in Guatemala, powerfully fueled by social media has begun to forge a culture of zero tolerance towards impunity.

The strengthening of the public sphere in Guatemala has been led by the emergence of different actors in civil society, who concerned with social justice, play the role of watchdog organizations critically monitoring the activities of government institutions. These organizations rely heavily on social media channels like Twitter and Facebook for alerting the general public when they detect actions that go against the public interest – for example, bribery, embezzlement, extrajudicial executions and the death of minors under the tutelage of the state. These are concrete examples of the devastating effects of dysfunctional state institutions in Guatemala that have triggered sharp criticism against many governments.

We suggest that the emergence of different groups concerned with social justice in Guatemala create content in social media with different perspectives and motivations that play an essential role in enabling the citizenry to understand how dysfunctional state institutions affect their everyday life. Moreover, the various forms of social interaction afforded by social media (e.g., posting and sharing) enable a space for discussing and judging wrongdoings committed by public authorities. Hence the research question we seek to answer in this paper is: How social media strengthens the public sphere in Guatemala by expanding shared awareness on situations that arise due to the malfunctioning of public institutions?

To answer our research question, we engaged in a qualitative study using data from Twitter in the context of a Guatemalan tragedy where 41 girls lost their lives. The girls were living in a state-run care home that caught fire. During the aftermath, the tragedy was discussed extensively on social media. Uncertainty was high as stories from diverse sources pointed out an array of factors surrounding the tragedy including reports of child abuse and the prosecution of government officials. In the following days, these discussions led to the formation of a social movement aimed at clarifying the causes of the tragedy and ensuring that the guilty parties are prosecuted.

**Theoretical Underpinnings**

**Sensemaking through Social Media**

Different sources of literature have directly discussed the notion of sensemaking to explain human behavior in the presence of information uncertainty and situational ambiguity (Aguirre et al. 1998; Oh et al. 2013; Weick et al. 2005). Sensemaking describes the process in which uncertainty drives people to search for meanings that allow them to make sense of reality (Mills 2003, p. 44). Efforts at sensemaking occur “whenever the current state of the world is perceived to be different from the expected state of the world” (Weick et al. 2005, p. 414).

Social interactions play a crucial role in sensemaking as people attempt to construct meaning and reduce uncertainty. Thus, sensemaking “is an issue of language, talk, and communication” (Weick et al. 2005, p. 409). For example, the social uprisings during the Arab Spring in 2011 demonstrated that social-media-enabled communications were essential for the emergence of processes of collective sensemaking because they enabled immediate connections among previously disconnected groups of people (Oh et al. 2015). Thus, sensemaking manifests through social media as the communication behaviors of active information seeking, offering, and sharing among people with shared ideas and experiences (Oh et al. 2012).

In this fashion, sensemaking through social media can be understood as the confluence of technology features (Majchrzak and Markus 2012) and attributes that characterize human behavior such as searching
for meaning and making sense of equivocal inputs (Oh et al. 2015). Organizations with a presence in social media tap into features such as posting (e.g., tweeting) to articulate their views and interpretations on ongoing circumstances in ways that are visible to others. As a result, user-generated content allows “lifting equivocal knowledge out of the tacit, private, and complex to make it explicit, public simple, and relevant to the situation at hand” (Weick et al. 2005, p. 413).

We then draw on discourse analysis for laying out a framework that allows us to classify of content in social media that arise in processes of sensemaking.

Understanding Discourse through Semantic and Pragmatic Relations

Understanding a discourse can be regarded as the construction of a mental representation of the discourse by the reader (Sanders et al. 1992). According to Sanders et al. (1992, pp. 1,2), an acceptable discourse representation “has a property that distinguishes it from the representation a reader might make of an arbitrary set of utterances: the representation of the segments in the discourse are linked coherently.” For example, the text below comes from a tweet created in the context of a tragic accident in which 41 girls lost their lives while living in a government-run center. We can infer a coherence relation of the form “argument-claim” (Sanders et al. 1992, p. 11) between the segments of this message as it allows us to experience it as a connected discourse.

(1) “Do not deceive us: If the President blames the society and the past for the tragedy is because he did not fulfill his obligation.”

The argument that the President does not take responsibility but instead attributes the tragedy to social issues and historical reasons is used as evidence by the author of the tweet to claim that the President did not fulfill his duties.

Furthermore, the way these coherence links are established “transcends the linguistic aspects of a discourse and that of a cognitive nature” (Sanders et al. 1992, p. 2). This implies that lexical markers like but, on the other hand, and because are not mandatory for a coherence relation to exist (Sanders 1997). This aspect is important in social media communications since it enables the consideration of elements such as hashtags that are often not connected lexically to other text. For example, in the message below, a coherence relation of the form “condition-consequence” (Sanders et al. 1992, p. 11) exists between the hashtag and the remaining text.

(2) “For the Victims of the Home Virgen de la Asunción! #GuatemalaIsInMourning.”

In this example, the death of the girls at the care home creates the condition for the entire country to be in mourning.

Thus, a coherence relation is an aspect of the meaning of two or more discourse segments that cannot be described in terms of the meaning of the segments in isolation (Sanders et al. 1992). The theory of coherence relations introduced by Sanders et al. (1992) proposes a taxonomy for describing the whole set of coherence relations (e.g., argument-claim and condition-consequence) in terms of four basic notions or primitives. In this study, we are interested in the primitive of source of coherence, which can have two values: pragmatic and semantic.

According to Sanders et al. (1992), if the discourse segments are related because of their propositional content (i.e., they follow a logic that is independent of the context), then the source of coherence is semantic and reflects a semantic relation. In this case, the writer refers to the relatable meanings of the segments. For example, the text below contains messages extracted from a video embedded in a tweet aimed at explaining the antecedents of the tragedy.

(3) “More than 600 girls and adolescents were under the tutelage of the State. The Secretariat of Social Welfare received children and adolescents from 0 to 18 years old, victims of violence.”

The text above comprises two sentences related by their propositional content. The expression of meaning in this sentence is coherent because it is part of our knowledge that welfare organizations operated by the government exist to take care of children who have suffered hardships in life.

On the other hand, a relation is pragmatic if the discourse segments are related because of the writer’s intention of one or both segments. In pragmatic relations, the coherence relation concerns the speech act
status of the segments. In other words, the coherence exists because of the writer's goal-oriented communicative (speech) acts. For example, the tweet below illustrates a pragmatic relation between the sentences.

(4) “When 33 girls die in custody of public authorities, it is no longer an accident. It is a state crime.”

The text in this tweet exhibits a pragmatic relation because the state of affairs in the first sentence is not the cause of the state of affairs in the second sentence, but the justification for making that utterance. This tweet attempts to persuade the reader that the tragedy was not the result of an unexpected event, but the outcome of deviant actions perpetrated by the state. In the same way, the tweets presented in (1) and (2) are also examples of pragmatic relations.

We draw on the notion of source of coherence and text types to classify content created social media during processes of sensemaking. Text types or genres refer to the author’s communicative goal which can be: informative, expressive and persuasive (Brewer 1980). A study by Sanders (1997) proposes a set of relationships between the source of coherence and the text type that distinguish the mechanisms by which authors achieve their communicative goals. According to Sanders (1997), the structure of informative content “in which the writer’s goal is to inform the reader about something” is dominated by semantic relations (Sanders 1997, p. 136). On the other hand, persuasive and expressive content is governed by pragmatic relations.

The reason for using discourse analysis for understanding content produced during processes of sensemaking is due to the cognitive nature underlying the notion of source of coherence. We argue that the question of understanding how people connect segments within a single message (pragmatically or semantically) offers an interesting insight into the mechanisms by which messages with different purposes (inform, comment or persuade) fulfill their goal.

In the next section, we draw on Sanders et al. (1992)'s notion of source of coherence as a method for classifying content in Twitter created during situations involving high levels of informational uncertainty and situational ambiguity – in our case, the decease of the 41 girls in a state-run care home.

**Research Methodology**

In this study, we are interested in examining the role of social media in strengthening the public sphere in Guatemala by expanding shared awareness on situations that arise due to the malfunctioning of public institutions. We focused on messages authored on Twitter related to a tragic incident in Guatemala where 41 girls died because of a fire in a children’s care home operated by the government.

We analyzed the Twitter data in two iterations. In the first iteration, we classified the data following Brewer (1980)’s taxonomy of text types and Sanders et al. (1992)’s notion of source of coherence. In the first iteration, we performed a qualitative analysis to understand the meaning conveyed by the tweets under the expressive and persuasive types. In the second iteration, we focused our analysis on the informative type of tweets. In the next subsections, we present the research context, as well as our data collection, filtering, coding scheme, and analysis.

**Research Context**

The place known as *Virgen de la Asunción* shelter was a care home operated by the government for the protection of children under the age of 18 who had suffered abuse or had been abandoned by their families. On the morning of March 08, 2017, a group of girls tried to protest against alleged abuses in the care home (Goldman 2017). In response, the guardians of the shelter locked many girls in a small room of four by four meters (Goldman 2017). The situation escalated when a fire originated inside the room. Reports by the Guatemalan’s national police said the fire started when the locked girls burned mats as a means of protesting (BBC 2017). As consequence of the fire, 19 girls perished immediately in the care home, and several more died in the coming days due to high-degree burns. In total, 41 girls lost their lives as result of the fire.

The tragic incident instigated deep feelings of dissent in the general population since the victims were all girls aged between 14 and 17 years old. In the aftermath, uncertainty was high as stories from diverse sources pointed out an array of factors including reports of child abuse in the care home and the prosecution
of government officials. In the following days, the tragedy motivated a movement that initially mobilized thousands of Guatemalans in several crowd protests. The demonstrations, coordinated mainly through social media services Twitter and Facebook, targeted the Guatemalan government, and in particular, asked for the resignation of the Guatemalan President. In the following months, the tragedy inspired different groups in Guatemala to get involved with the movement by ensuring that the causes are clarified and that the guilty parties are prosecuted.

**Data Collection**

We collected data from Twitter using a snowball sampling approach. The Twitter website allows keyword searches to retrieve historical data about the tragedy. We first searched tweets containing the keywords “virgen asunción,” “hogar seguro,” and five hashtags reported by newspapers in Guatemala as trends on Twitter related to the tragedy. Within the results of the first search, we selected the nine most used hashtags and performed a second search. Since we were interested in analyzing content in the context of the social movement originated by the tragedy, we considered tweets posted from March 1 to March 20, 2017. In total, we collected 11,682 tweets adding a total of 74,586 retweets.

**Data Filtering**

The total number of tweets collected represents an enormous volume of data that is impossible to analyze in a single study. Thus, we considered the action of sharing content (retweeting) as a proxy measure of influence to filter out the most influential tweets. We used the rich-get-richer model (Easley and Kleinberg 2010, p. 479) as a heuristic for identifying the most retweeted content in our data. Under the rich-get-richer model, influential entities in online environment can be measured by fitting the data to power-law distribution (Jackson and Rogers 2007; Kwak et al. 2010; Oh et al. 2012).

Using the number of retweets as a measure of influence, we fitted this variable to a power-law distribution and estimated the $x_{min}$ parameter that informs the point in the distribution that demarks the beginning of the heavy tail. The estimation of the $x_{min}$ parameter gave us the value of 38. We used this procedure as a heuristic to obtain a threshold-value that we could use to reduce the number of tweets.

By filtering out tweets with less than 38 retweets, we reduce the number of tweets from 11,862 to 169, which is a reasonable number that we can use for analysis. The reason for such significant reduction is that many tweets in the data were retweeted a few times or not retweeted at all. Figure 1 presents a visualization of the total of tweets collected (white area) compared with the total of tweets filtered for analysis (gray area). Figure 1 aggregates the number of retweets by adding all the retweets of all the tweets on each day. The period covered in Figure 1 spans to several days after the tragedy on March 08 and illustrates a period of peak activity on March 9 where Twitter networks flooded with discussions about the tragic incident.

![Figure 1. Frequency of Retweets Aggregated by Day](image-url)


**Coding Scheme**

We coded each tweet according to the source of coherence governing the relation of its segments (semantic or pragmatic) and text type (informative, expressive and persuasive). For determining the source of coherence, we followed the paraphrase test proposed by Sanders (1997). Table 1 depicts a summary of the criteria that we used for coding the data.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semantic</td>
<td>Segments are related because of their propositional content.</td>
<td>Sanders et al. (1992).</td>
</tr>
<tr>
<td>Pragmatic</td>
<td>Segments are related because of the writer's goal-oriented communicative acts.</td>
<td>Sanders et al. (1992).</td>
</tr>
<tr>
<td>Informative</td>
<td>The writer's goal is to inform.</td>
<td>Brewer (1980).</td>
</tr>
<tr>
<td>Expressive</td>
<td>The writer's goal is to express his or her feelings and attitudes.</td>
<td>Brewer (1980).</td>
</tr>
<tr>
<td>Persuasive</td>
<td>The writer's goal is to persuade the reader of something.</td>
<td>Brewer (1980).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Expressive</th>
<th>Persuasive</th>
<th>Informative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semantic</td>
<td>0</td>
<td>0</td>
<td>47</td>
</tr>
<tr>
<td>Pragmatic</td>
<td>68</td>
<td>18</td>
<td>36</td>
</tr>
</tbody>
</table>

**Table 1. Coding Scheme**

**Analysis**

In the first iteration, we classified the tweets following Brewer (1980)'s taxonomy of text types and Sanders et al. (1992)'s notion of source of coherence. Table 2 shows the contingency table for the distribution of the four levels in the two categorical variables that resulted from the coding task. Figure 2 displays a visualization of the distributions in Table 2. Our findings agree with Sanders (1997) in which semantic relations dominate informative texts whereas pragmatic relations dominate expressive and persuasive texts.

In the first iteration, we performed a qualitative analysis of the tweets under the expressive and persuasive categories to interpret the meaning conveyed by these types of tweets (Klein and Myers 1999). Our analysis revealed that tweets under the expressive category, aimed at either commenting on the victims or the perpetrators of the tragedy. Specifically, expressive tweets focusing on the girls as victims seek to claim an injustice by amplifying their victimization. For example:

(5) “We are missing 33 girls, do not forget them. #ItWasTheState. #NotOneLess.”

The author’s goal of the tweet in Example 5 is expressive in identifying the girls as victims of an injustice. The tweet tries to have an effect on the audience at remembering that the girls have died. In doing so, the segments in the tweet cast a performative function (speech act) because is asking us to do something and therefore it exhibits a pragmatic relation. On the other hand, expressive tweets focusing on the perpetrators of the tragedy refer to explicit accusations about those responsible. For example:
(6) "We do not want morals we want justice. Who killed the girls? #ItWasTheState."

The tweet in Example 8 expresses the idea that the President has some accountability for the death of the girls. The first segment identifies the Guatemalan President by referring to a television show called “Morals” in which the President starred before his candidacy. The question in the second segment tries to imply the girls were in fact murdered. In a similar vein to Example 5, the coherence relation between the two segments is pragmatic because of the author’s goal-oriented communicative act – it is trying to convince us that the President is responsible for the tragedy.

Figure 2. Clustered Bar Chart for Distributions in Table 2

Furthermore, persuasive tweets represent explicit calls for demonstrations at different locations in Guatemala City. For example, the tweet in Figure 3 reads: “We feel together. Grieve, anger, and pain. 6 PM presidential house. Let’s share silence and mourning. Come with family.” This tweet is a persuasive tweet because its purpose is to motivate the general public to attend a public gathering as a way of protesting the injustice committed against the girls.

Figure 3. Example of a Persuasive Tweet

In the second iteration, we focused on the tweets under the informative category. Unlike the expressive and persuasive types, informative tweets are dominated by both semantic and pragmatic relations which make tweets under this type the most interesting in the dataset. A close reading of informative tweets shows that
they comprise descriptions of the causes and events related to the tragedy. In contrast to expressive tweets, informative tweets resemble news reports on the tragic incident without explicitly pointing out a culprit or expressing sentiments of dissent against the authorities. An important characteristic of informative tweets is that they were authored mostly by media organizations. Additionally, informative tweets included links to external web pages, videos or images as evidence supporting the reports they communicate. For example, the two sentences below illustrate two tweets coded as semantic and informative.

(7) “@HRooseveltGT informs that it does not request supplies to serve patients of the Seguro Hogar Virgen de la Asunción. We have enough supplies.”

(8) “With the hashtag #FueElEstado, [social media users] call for a demonstration next Saturday to demand justice in the case of the death of 32 girls.”

In both cases, the segments of the tweet form a semantic relation because they provide the logic to construct a meaning that is independent of the context of the tragedy. Both tweets are informative because of the authors’ goal was to provide an update on the events surrounding the tragedy. Conversely, the tweets below illustrate examples of pragmatic-informative tweets.

The tweet in Figure 4 reads: “Today, Guatemala demands justice for the 33 girls who died due to the negligence of a State that turned its back on them. #ItWasTheState.” In this message, the writer’s goal is to inform its audience that people have come together to protest and claim justice for the girls. However, the second segment attempts to provide a reason for the death of the girls by highlighting the neglect of the Guatemalan state – a reason derived from the fact that the girls were in charge of a government dependency. Thus, the presence of a segment that draws on context rather than on the state of affairs of the other segment forms a pragmatic relation between the two segments.
Similarly, the tweet in Figure 5 reads: “Water from the fountain in the central square is red for the girls who died in the Care Home. #ItWasTheState.” This tweet illustrates a segment that seeks to highlight the suffering of victims of the tragedy by associating the red color of the fountain (caused by a colorant) to the deceased girls.

The tweets in Figure 5 and Example 5 were authored by a media organization that engaged in the production of several articles published through Twitter, Facebook and their website. These articles unveiled antecedents of child abuse in the care home and the neglect of the authorities of the center on addressing those issues (Nomada 2018). The tweets authored by this organization were amongst the most influential in our dataset (according to the number of retweets they obtained). We observed that many of these tweets were classified under the informative-pragmatic and expressive categories. The themes behind the majority of these tweets claimed the government was the main culprit of the tragedy – claims in full resonance with the conclusions of their journalistic work.

We discuss the implications of these findings in the next section.

Discussion

This study aligns with the “environmental” view of social media suggested by Shirky (2011). Accordingly, social media is not a mere instrument for accessing information but an ecosystem for strengthening the public sphere through the freedom of personal and social communication among a state’s population. In this paper, we regarded content created on Twitter after the Guatemalan tragedy as part of a process of sensemaking undertaken by the civil society (Oh et al. 2015). In the aftermath, many people turned to social media channels to find out what happened, express their opinions, and indignation in attempts to make sense of the situation. During this period, content in social media was created with different purposes, such as informing and commenting, in efforts to turn the circumstances into a situation that is comprehended explicitly in words by the general public.

The movement that emerged in the days following the tragedy depict the case of how social media enables processes of collective sensemaking where tragic incidents are interpreted as unjust and punishable acts. The meanings and reality constructed from such process illustrate the interpretation of a tragic event caused by the malfunctioning of a state-run care home into a nationwide tragedy that concerned everyone in Guatemala.

In linking back to our theoretical foundations, our findings point to a process of sensemaking driven by pragmatic content in social media. In contrast to semantic content, the argumentative nature inherent to pragmatic relations gives rise to stories that rely more on plausibility than accuracy to convey meaning. This observation echoes Weick et al. (2005)’s theory of sensemaking which predicts sensemaking is driven by plausibility rather than accuracy. According to Weick, when the story is a sufficiently plausible account of “what is happening out there?”, it can serve as a landscape within which others might be able to make commitments and to act in ways that serve to establish new patterns of behavior. Under this light, the large number of “pragmatic” tweets framing the tragedy as a crime perpetrated by the government contributed to the development of a story plausible enough to mobilize thousands of individuals to the streets to claim justice.

Regarding our research question on the role of social media on strengthening the public sphere in Guatemala by expanding shared awareness on situations that arise due to the malfunctioning of public institutions – the presence of informative messages governed by pragmatic relations reflect the production of stories with a higher interpretive value than solely descriptive reports of the tragedy. In this way, coverage in social media by different media groups expanded shared awareness on the failure of the home to fulfill its responsibilities by highlighting the causes and culprits of the tragedy.

Further Work

This research has limitations which give direction for future study. The study of how social media strengthens the public sphere could include not only the text contained in the messages, but also links to external content such as articles and stories. Additionally, the consideration of the source of the messages (e.g., its social purpose or type of organization) is important for explaining the influence of different authors in processes of sensemaking and how they draw the attention of new followers while keeping their audiences
engaged. These questions converge into a larger question of how social media supports the strengthening of the public sphere in nations fighting relentlessly against corruption and impunity in public institutions. This research leaves these questions open to be answered as future research topics.

REFERENCES


