Tweeting a deluge:

Understanding the use of social networking site content by journalists during a natural disaster

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Abstract

This research examines the extent to which journalists assert narrative control over content from social networking sites during disaster events, using the Toronto flooding that occurred on July 8, 2013 as a case study. Using the theory of the disaster marathon narrative outlined by Liebes (1998), this research uses a hybrid of qualitative and quantitative research approaches to understand *how* the visual and linguistic elements of the news coverage worked together to generate meaning. The research reveals that the content selected from social networking sites generally served to reinforce the disaster narrative, as conceptualized by Liebes (1998). However, it was observed that the integration of some content from public stakeholders (i.e. police, hydro organizations) served to counteract the typical disaster narrative. This research contributes to the body of discourse analytic research dedicated to understanding the interactive practices between social networking sites and 'traditional' journalism.

1. Introduction

Communications technologies are so pervasive in Western society that it can be difficult to imagine how a disaster could be experienced without them. Disasters represent one of the most closely followed categories of news. Research from the Pew Research Center for People and the Press (2010) indicates that news of recent natural disasters, including Hurricane Katrina (2005), the Indian Ocean Tsunami (2005) and the Haiti earthquake (2010) were heavily followed by American news watchers, with at least 58% of the public indicating they followed these stories 'very closely'. In reporting disaster, research has consistently shown that mass media provides more than just entertainment value: they provide crisis communications leadership in times of confusion and despair (Quarantelli, 1991). They serve critical roles that can alter human behaviour and mitigate harm to the community under threat (Quarantelli, 1991; Scanlon, 2007; Houston, Pfefferbaum & Rosenhaltz, 2012). In disaster situations, the mass media can become a beacon—a functioning alert system that provides updates regarding evacuations, service updates and cancellations (Scanlon, 2007).

In recent years, however, popular social networking sites like Twitter, Facebook and YouTube have risen to prominence as sources of information during disasters. Witnesses to news and crisis events have used Twitter to quickly disseminate their experiences, photos, videos and observations. As early as 2007, users reported that Twitter was an "invaluable tool for distributing information [during disaster]" (Paulsen, 2007), keeping pace with breaking news events faster than local and major news outlets during severe wildfires in California (Paulsen, 2007). In 2008, eyewitnesses to an earthquake in Sichuan, China were

quick to report their eyewitness accounts and experiences on Twitter, catching the attention of academics who noted the quick spread of information on the social networking site (Li & Rao, 2010). In that disaster, many people who reported the earthquake on Twitter did so *while it was happening*. It was later reported that Twitter users knew about the earthquake before the US Geological Survey's advanced equipment was able to collect and broadcast information about it. The power to broadcast eyewitness accounts faster than news or official scientific data was affirmed again in 2011, when a Virginia earthquake was reported on Twitter by users before the same earthquake was felt in New York 30 seconds later. Days after, Twitter released an ad that playfully boasted it was "faster than earthquakes" (Twitter, 2011, August 26). In October 2012, when Hurricane Sandy knocked out power to the Northeast Canadian-American coastline, affected residents used social media on mobile devices to exchange information, sending 20 million tweets between October 29 and October 31, which represented more than twice the amount of tweets from the previous two days (Guskin & Hitlin, 2012).

Twitter's capability as a breaking news service has not gone unnoticed by major meteorological services, such as Environment Canada, which are increasingly using it to access information from witnesses on the ground. In 2013, Environment Canada launched a program, *British Columbia and Yukon Storm Reporting*, in which Twitter users are invited to share localized observations of abnormal or extreme weather (i.e. wind damage, hail, funnel cloud, snowfall, freezing rain) using the pre-designated hashtags '#bcstorm' and '#ytstorms' (Environment Canada, 2013). The project utilizes the popular convention adopted by Twitter users of using a centralized hashtag to communicate information on a particular weather or news event. Environment Canada is no stranger to using amateur reporting techniques to

collect weather information. The department's *Severe Weather Watcher Program* (established in 1978) collects information from volunteers in urban and remote regions across the country, and uses this information to issue weather watches and warnings to the public and major news outlets (Environment Canada, 2010). The US Geological Survey has also studied Tweeting patterns during earthquakes, and found that algorithms used against data from Twitter are often faster and more accurate at detecting seismic activity than some geographic survey equipment, particularly in remote and less-instrumented areas of the world (Earle, Bowden & Guy, 2011). Clearly, the micro-broadcasting structure of Twitter and similar social networking sites is challenging the pace of official reporting institutions, like Environment Canada, by enabling researchers to collect and broadcast more information from more people, faster than advanced scientific equipment was previously able to. Particularly in the context of natural disasters, this has wide-ranging implications for officials and emergency response personnel and indeed members of the public, who can now react and respond to disasters faster than they ever could before.

But how are social networking sites affecting newsgathering practices during disasters? Traditionally, journalists have reacted quickly to news events and mobilized staff on the ground to collect and disseminate information to the public as soon as it becomes available. In turn, the public has typically relied on news outlets to provide them with warnings prior to the event and, afterward, to provide them with a description of what has occurred and direction on recovery (Houston, Pfefferbaum & Rosenhaltz, 2012). The introduction of social networking sites, however, appears poised to diminish the roles assumed by journalists during disaster by providing an outlet for citizen witnesses to document their experience and for organizations to coordinate recovery efforts directly with

the public. Yet, the literature suggests journalists continue to not only exercise, but also bolster their authority over content from social networking sites by recontextualizing the content as an element of news coverage (Lorenzo-Dus & Bryan, 2011).

Many scholars concede that although the use of Twitter and other social networking sites is changing the ways information is shared and exchanged, these new forms of public participation are not altogether replacing journalism. Rather, they appear to add value or complement journalism in new and important ways (Jarvis, 2006; Hermida & Thurman, 2008; Hermida, 2010; Neuberger & Nuernbergk, 2010; Curran, 2011; Cacciatore et al., 2012; Allan, 2012; Broersma & Graham, 2012, 2013). Some scholars have argued that social networking sites (in particular, Twitter) are challenging the pace of the news environment by providing a kind of ubiquitous, continuous stream of information. Journalism researcher Alfred Hermida (2010) has introduced the concept of Twitter as a kind of "ambient journalism" (p. 301) that has actually reshaped society's mental model of news and events. Similarly, Zizi Papacharissi and Maria de Fatima Oliveira (2012) have highlighted how centralized discussions on Twitter (enabled by hashtags) have turned it into an awareness system that interacts with journalism in ways that make it difficult for audiences to discern traditional news from opinion and emotion (p. 268). Likewise, Stuart Allan (2012) understands Twitter's contributions to journalism as a kind of engaged "citizen witnessing" that has altered the power imbalance that previously stood between journalists and their audiences. A central aspect of these debates is whether Twitter and other social networking sites are reforming news production into a shared space that is indeed publicly occupied.

A comparatively understudied area of research and debate, however, is *how* content is taken from its original context on social media and re-articulated as news content. This gap

in the literature is the basis for the central and guiding research interest of this research paper, which is: how are journalists using social networking sites as news sources within their news coverage of disasters? Broersma and Graham (2013) have offered some insight with their research on how different news outlets in Europe have recontextualized content from Twitter over a four-year period (2007-2011), cataloguing the evolution of this new interaction between Twitter users and journalists within the production of news content. Building on the momentum generated by Broersma and Graham (2013), this research paper aims to offer insight into how tweets and information from Twitter are re-articulated in news coverage of a disaster. Using a hybrid of quantitative and qualitative analysis, this research attempts to provide insight into the nuances of this re-articulation, by assessing how journalists exercise and maintain authority over the news narrative. In doing so, this research will attempt to situate the use of social networking sites as a news source within larger theories of news narrative and production.

2. Literature review and conceptual framework

As the following literature review will detail, the use of content from social media in news stories can be contextualized within the larger body of literature on the professional practices of journalism. More specifically, the following sections will highlight how a pillar of the profession—journalistic authority— affects and is affected by content from social networking sites. Section 2.1 will begin by conceptualizing the notion of 'journalistic authority', as something that delineates the profession from other forms of amateur reporting and move on to describe how it is expressed and exercised. Section 2.2 will consider the established journalistic convention of gatekeeping as a useful metaphor for interpreting how journalists select and manage content from social networking sites. Finally, Section 2.3 will

serve as a primer for the case being considered in the methodology. Specifically, it will raise questions about how social networking sites may generate contention over the narrative control of the 'disaster marathon', which has typically been dominated by journalists.

2.1. Journalistic authority

The introduction highlighted the important role that mass media have traditionally played in disaster communications. Building on this momentum, this section will introduce the concept of journalistic authority as a powerful element of news production that empowers journalists to claim the role of cultural storytellers. It will then consider recent literature that describes how journalists attempt to exercise or claim control over content from social networking sites.

2.1.1. Defining journalistic authority

Journalistic authority is understood as "the power possessed by journalists and journalistic organizations that allows them to present their interpretation of reality as accurate, truthful and of political importance" (Anderson, 2008, p. 250). To claim authority on a subject or story is to claim legitimate power over it (Bock, 2011, p. 641) and doing so allows a journalist to define not only the collective memory of the event being reported on, but also future events (Zelizer, 1990)[1]. Recent work by Robinson (2009) found that despite the widespread availability of witnesses and citizen-generated content following the Hurricane Katrina disasters, journalists activated a series of narrative techniques and conventions that allowed them to continue to claim exclusive authority over the narrative and the collective memory of the disaster. In this example, Robinson (2009) found that journalists claimed their

[1] For example, Zelizer (1990) found that in the case of the Kennedy assassination, mass media used a series of techniques that privileged their own narrative above all others, even if it contradicted or omitted emerging evidence from the event.

authority by assuming the role of heroes and watchdogs while casting citizens and citizen journalists as institutions and archetypes who need the press to aid in their recovery.

Indeed, as Walter Lippmann first argued, "anybody can be a journalist—and usually is" (cited in Zelizer, 2005, p. 75). This is especially true now given the pervasiveness of online networking and blog sites, which allow individuals to broadcast their observations and experiences to audiences small and wide. It is the expression of journalistic authority that differentiates and defines mass media's voice in journalism and allows journalists to legitimize their narrative control over an event or experience (Zelizer, 2005, p. 188). There are three ways in which journalistic authority is exercised: by the ability to name things, frame things, or present them as 'true' (Bock, 2011, p. 641). While objective truth is not always known or agreed upon, in the context of news, the truth of a news story is constructed by (1) discourse surrounding the practice of journalism (i.e. the legitimation of journalism itself) and; (2) through discourse surrounding work (i.e. everyday routines and conventions in creating the narrative) (Bock, 2011). The following paragraphs will consider these two elements in more detail, as they are heavily embedded and implied in the news narrative.

2.1.2. Establishing journalistic authority through discourse and practice

Journalists occupy a space commonly known as the 'fourth estate', in which they possess a social and political influence that is intended to be distinct from that of the governing authority[2]. The result is a 'contract of trust' between mass media and the public (Littlefield & Quenette, 2007, p. 29), which empowers the former to report stories, monitor powers and uncover justice. In Canada, the longstanding allocation of public resources for the national

[2] In Canada, this freedom is loosely reflected in *the Canadian Charter of Rights and Freedoms* Section 2.B., which is designed to protect a journalist's freedom of expression.

public broadcast network CBC (Canadian Broadcast Corporation)[3] solidifies the role of journalism as a public service that is necessary. Moreover, the International Red Cross/Red Crescent movement, which facilitates aid and relief during conflict and disaster, recognizes journalism as a "heroic act" (Red Cross Red Crescent, 2012, p. 1) that helps draw attention to issues and quell rumours, and which requires special protections at an international level. The service elements of journalism are reflected in news coverage of disaster, as previously stated, by providing the public with vital information, such as evacuation orders, storm tracking and witness testimonials (Seeger et al., 2003).

News production theorists like John Carey (1989) and Gaye Tuchman (1978), however, have raised questions about the extent to which the service aspect of news is realized. Increasingly, theorists have questioned news production and its perceived objectivity, pointing to language choices and levels of discretion in the news production process that transform experience into a narrative form with a beginning, middle and end that is recognized cognitively as journalism (Shoemaker & Vos, 2009). Tuchman's (1978) work *Making News: A Study in the Construction of Reality* remains one of the most comprehensive works on the professional structure of journalism. In it, she described the processes through which reality becomes news. She compared news to a form of manufacturing—a transformation of "raw materials" (p. 110) from reality into recognizable narrative forms known as 'typifications'. In effect, Tuchman (1978) suggests that no news is unpredicted because all news is arranged according to predefined scripts and narratives[4]. Disaster marathons (which will be profiled in greater detail in Section 2.3) contain many of their own

[3] As of late, however, the CBC has been plagued by recent budget cuts, including a loss of $115 million in federal government funding between 2012 and 2015 has disrupted the delivery of news in smaller and remote communities in the North as well as in London Ontario (CBC News, 2014).

[4] For truly unexpected and undefined events, Tuchman (1978) introduced the catchall category of "what-a-story" (p. 59), which dictates that even the most unusual news events rely on established typifications to communicate their unexpectedness

narrative typifications. For instance, one of the most common typifications identified in disaster marathons is a tendency to privilege information from 'official sources' such as governments and emergency personnel and away from citizens and witnesses (Walters & Horning, 1993). It is here that the problematic emerges: it is not clear how news organizations are maintaining their journalistic authority over disaster marathons when amateur content from social networking sites clearly outweighs (or even conflicts with) that of official sources. Acknowledging these gaps, this research attempts to provide a more nuanced exploration of journalistic authority in news texts from news organizations during a disaster marathon. As this section has outlined, this involves a careful consideration of news production decisions and how they are embedded into news texts. The following section will provide a conceptual primer on the convention of gatekeeping as an application of journalistic authority.

2.2. Gatekeeping of participatory media

While not explicitly using the term 'gatekeeping', Walter Lippmann (1965) was one of the first scholars to highlight the strategic and routine ways in which news editors select information for inclusion in news stories. In his 1922 book, *Public Opinion*, he wrote:

> "Every newspaper when it reaches the reader is the result of a whole series of selections as to what items shall be printed, in what position they shall be printed, how much space each shall occupy, [and] what emphasis each shall have" (p. 9).

He went on to argue that such decisions are not pre-defined standards, nor arbitrary choices, but are practiced through routine "convention" (p. 9) by journalists. Lippmann (1965) viewed these decisions rather innocently, and suggested that gatekeeping was merely a way for journalists to tailor news so that the audience may identify with the information being

presented to them (p. 10). Lippmann's (1965) observations have spawned an entire genre of communication theory on the role of gatekeeping, news selection and most recently 'curation'. Using gatekeeping theory, this section will draw attention to gatekeeping as a news production convention that has evolved to now also explain how content is selected from social networking sites during disaster marathons. The following paragraphs will consider (1) the type of information deemed newsworthy in breaking weather events and (2) the extent to which social media affect what information is included in news coverage of breaking weather events. This section will begin by conceptualizing gatekeeping as a convention within journalistic practice. Next, it will highlight the role of news values in influencing the gatekeeping process. Finally, it will reflect on how these news values influence how journalists select and manage content from social networking sites during disaster marathons specifically.

2.2.1. Defining gatekeeping

For the purposes of this paper, gatekeeping in journalism refers to "the process of culling and crafting countless bits of information into the limited number of messages that reach people every day and which determines not only which information is selected, but also what the content and the nature of messages, such as news, will be." (Shoemaker & Vos, 2009, p. 1)[5]. At the most basic level, the gatekeeping metaphor involves selecting, rejecting and changing items at different stages before they reach the final consumer (Shoemaker & Vos, 2009, pp. 12-13). David Manning White (1950) was the first to apply the gatekeeping metaphor to journalism, highlighting the various stages of discretion by news teams to select and process

[5] In communication studies, gatekeeping began as a metaphor put forth by David Manning White (1950). White (1950) borrowed the metaphor of 'gatekeeping' from social psychologist Kurt Lewin. Lewin was looking for a way to describe the various levels of discretion involved in food production before it reached the consumer.

information as newsworthy. His definition of gatekeeping is summarized in Ali & Fahmy (2013) as:

> "A selection process where 'gatekeepers' pick and choose which news articles and/or visual images to run in the media. The ensuing content we see in traditional media therefore tends to follow organizations' news routines and narratives" (pp. 55-56).

Like Lippmann (1965), White (1950) highlighted the role of the audience in determining what information is selected as newsworthy, writing: "theoretically all of the wire editors' standards of choice should refer back to an audience who must be served and pleased" (p. 72). However, White (1950)—reflecting on his own experiences as a journalist—suggested that any ideas about the audience ultimately appeal to the personal and individual experiences of the gatekeeper (i.e. the journalist or editor) as a measure of what the audience may be interested in.

When White (1950) first established the gatekeeping metaphor for news, he was focused on the production techniques of the newspaper, which was the dominant medium at the time. Today, the affordances of digital technology have allowed journalists to create news articles that combine not only text and images, but also elements like video and sound to create meaning. What's more, this multiplicity of possible formats can now be easily created and exchanged by many members of society. As Kress (2010) maintains, each new "resource for meaning-making" (Kress, 2010, p. 34) carries with it a different form of representation. For instance, a video clip of a journalist reporting from the scene of a terrorist attack encodes a different level of authenticity and commands a different degree of authority than a low-quality video shot from a camera phone while the attack was happening (c.f. Lorenzo-Dus & Bryan, 2011). This underscores the importance of looking at gatekeeping not only in terms of *what* information is selected, but also *how* these selections are used to

create meaning in the news medium in which it is presented. The following two sections will focus on the gatekeeping practices used to select content from social networking sites. Section 2.2.2 will detail these gatekeeping practices in relation to established 'news values', while section 2.2.3 will consider some of the unique features of content from social networking sites, and how they may be changing the practice of journalistic gatekeeping.

2.2.2. News values and selection criteria

News organizations are not overt about their selection criteria and the gatekeeping process should be understood as an unspoken convention rather than as a formal technique. As Shoemaker and Vos (2009) point out, information is not intrinsically newsworthy—journalists must determine information's newsworthiness (p. 25). Galtung and Ruge (1973) were the first to outline criteria that they believed enhanced an event's newsworthiness—criteria they refer to as "news values". The more these news values are present in a news event, the more likely it is that it will be covered. Some examples of news values outlined in Galtung and Ruge (1973) include 'reference to elite persons' (the quality of being associated with the rich or powerful), 'unambiguity' (the quality of being simplistic in understanding), 'unexpectedness' (the quality of being rare or surprising) and 'continuity' (the quality of being covered for a length of time).

In the context of disaster reporting, a content analysis of natural disaster reporting in Australia identified several qualities that appear to determine how much coverage a disaster marathon receives, many of which are closely aligned with Galtung and Ruge's (1973) seminal research (Bacon & Nash, 2002). For example, only a few disaster marathons are given attention at any one time, and disasters occurring in Western countries tend to take precedence in Western news coverage. Moreover, the coverage tended to privilege the voices

of politicians and NGOs; people who were not officials or experts accounted for less than 8% of sources (Bacon & Nash, 2002, pp. 9-14)[6]. A small number of studies have considered the effect of social networking sites on journalists' gatekeeping practices (c.f. Broersma & Graham 2012, 2013; Lorenzo-Dus & Bryan, 2011). In general, they found that despite the prominence and popularity of social networking sites as a source of updates and information *during* breaking news, journalists tended to use the sites to access elite voices rather than ordinary citizens or witnesses. A discourse analysis of news coverage of the 7/7 London bombings found that a relatively small amount of amateur content was used to illustrate the breaking news event, and that the source of the content was not formally credited (or not credited properly) (Lorenzo-Dus & Bryan, 2011). Moreover, Broersma and Graham (2013) found that across all types of news, journalists tended to privilege user-generated content from elite voices such as politicians, celebrities and athletes. This is consistent with the vast majority of research on participatory journalism that holds that mainstream news organizations filter user-generated content according to established news routines of individual news organizations (Singer, 2005; Domingo et al., 2008; Singer & Ashman, 2009; Ali & Fahmy, 2013) as well as informal conventions such as Galtung and Ruge's (1973) news values to guide what is newsworthy. Still, there is opportunity to further investigate the impact of user-generated content in light of the increased popularity of social networking sites and increased adoption of mobile technologies that enable micro broadcasting which can be both detailed and instantaneous. Moreover, as Lorenzo-Dus and Bryan (2011) noted in their study, there is a need to utilize qualitative discourse analytic methods in studying these practices, as they contribute a more nuanced understanding of journalist's gatekeeping

[6] The Australian study, however, was performed long before social networking sites emerged that allowed people to instantaneously broadcast photos, information and updates to wide audiences without the assistance of journalists and news networks.

techniques and can fill gaps left behind by quantitative content analysis. This might include, for example, the level of empowerment (or disempowerment) attributed to individuals who actually generate content on social media (Lorenzo-Dus & Bryan, 2011, p. 37). While this section has discussed how to understand gatekeeping within traditional news practices, the following section will consider how social networking sites are changing the newsgathering practice.

2.2.3. Curation as a gatekeeping technique

Rather than using the term 'gatekeeping', some scholars have described the process of filtering content from social networking sites (such as Twitter) using the reclaimed concept of 'curation' (Newman, 2009; Bruno, 2011; Hermida, 2012a; 2012b)[7]. The logic of this emergent form of gatekeeping is that journalists can no longer compete with social networking platforms such as Twitter, where users can broadcast information directly to other users from the scene of action (Newman, 2009). This is especially true in the context of breaking news, where the authority of a journalist is realized not by his or her ability to report first on scene, but to verify reports from user-generated content on social networking sites (Bruno, 2011; Hermida, 2012a; 2012b) and select which reports should be included (or 'curated') in news stories[8]. The process of choosing which information to verify still represents a powerful element of choice for journalists that can affect what information is included in a news story and which is excluded.

[7] A term traditionally reserved for the practice of managing collections of artwork and artifacts in a museum or gallery setting.

[8] One way of doing this is by using an online tool called 'Storify', which allows journalists to display and communicate the development of a news story as it occurs on social networking sites, all while archiving and curating tweets and information.

The continued gatekeeping role of journalists (in the form of curation) has raised questions about the nature of the involvement that social networking site activity actually has on the news production process (Gerhards & Schaefer, 2010; Fenton, 2010a; 2010b; Paulussen & D'heer, 2013). Fenton (2010a; 2010b) suggests that public participation in news production (via social networking sites) may have the effect of larger audiences receiving content from fewer sources because they are relying on news outlets to provide them with an understanding of what is happening on social networking sites instead of using the sites themselves. Further, research by Paulusseen & D'heer (2013) found that news organizations typically only use citizen-generated content for light-hearted human-interest stories (what are referred to as 'soft' stories), while reserving the more intense, immediate reporting associated with coverage of serious topics (referred to as 'hard' news) for professional journalists. Thus, the literature suggests that while social networking sites appear to play an important role in news production (Broersma & Graham, 2013, p. 451-452), there is only a small minority of users in a subset of news categories (e.g. 'soft news') that are actually cited in news stories. However, few studies have looked at the process of gatekeeping content from social networking sites in the context of specific categories of news, including breaking weather events. In the introduction, it was noted that citizens are typically invited or encouraged to participate in coverage of weather-related events via social networking sites. In Canada, this sentiment is reinforced by Environment Canada's official meteorological association, which collects data from Twitter to enhance emergency weather alert systems. As such, social media users (i.e. Twitter users) who share weather-related updates on their phone have the potential to participate beyond their traditional roles as contributors of *vox pop*. Indeed, it is possible that—in the context of weather reporting— their contributions on social networking sites may serve as distinct and important form of official and unofficial

reporting. This research aims, in part, to understand both the extent to which citizen-generated (i.e. witness) content from social networking sites are used in news articles about disaster, and also *how* this content is re-articulated within the news narrative.

2.3. The disaster marathon narrative

While the previous two sections have outlined some of the more general journalistic practices and routines for establishing journalistic authority—such as the use of gatekeeping and news values—this section will provide a conceptual primer for contextualizing these practices in the reporting of severe weather incidents as "disaster marathons" (Liebes, 1998, p. 71). This section will begin by defining Tamar Liebes' (1998) concept of the disaster marathon and then contextualize it within today's news environment. Next, this section will explore how journalists use their journalistic authority to manage the disaster marathon narrative. The theoretical framework (Chapter 3) will rely heavily on elements described in this section.

2.3.1. Conceptualizing the disaster marathon

Liebes (1998) established the disaster marathon as a sort of "kin" (p. 72) of Dayan and Katz's (1992) "media event". Media events, according to Dayan and Katz (1992), are a distinct genre of television; a form of mass-mediated ceremony that invites audiences to step outside of their daily routine and direct their attention to larger, symbolic ideas (pp. 1-2)[9]. According to Dayan and Katz (1992), the rise of the media event was due, in large part, to the emergence of electronic media technology that enabled audiences to consume events

[9] Examples of media events include Olympic ceremonies, royal weddings, presidential debates and even key episodes of popular television shows (Dayan & Katz, 1992, p. 13).

together, at the same time[10]. Critics (Real, 1993; Liebes, 1998) acknowledge the exclusions of Dayan and Katz's (1992) media event genre, in particular the absence of disasters or crises that seem to possess many of these necessary elements with the obvious exception that they are not preplanned. Liebes (1998) argued that technological advancements and a shift to 'live' news coverage as industry standard has rendered such organized events increasingly less relevant. Instead, Liebes (1998) suggested that a new genre— the 'disaster marathon'— was beginning to take the place of media events. This was reinforced in her more recent (2007) work with Elihu Katz. As the remainder of this section and the theoretical framework will highlight, disaster marathons represent a useful and distinct genre of news in which to study how social networking sites are integrated into news coverage. As such, it is very useful to the exploration of the questions raised in the foregoing about the shifting nature of journalistic authority, gatekeeping and narrative control.

Disaster marathons, according to Liebes (1998), are a distinct genre of news broadcasting associated with the live reporting of trauma (p. 74). As Katz & Liebes (2007) outline, the disaster marathon begins with a "dramatic announcement" of the disaster that interrupts and then cancels regularly scheduled programming. Clearly, Katz & Liebes (2007) had conceived of the disaster marathon in the context of broadcast news, (i.e. television), which relies on a steady but singular stream of information. In the context of online news sources (which is the focus of this research), it remains to be discerned what exactly constitutes an 'interruption', since there is no constant stream or schedule to be disrupted, and information is consumed from a wide variety of news providers. A more recent

[10] Dayan and Katz (1992) outline eight necessary elements that constitute a media event, namely that the event: (1) is broadcast live; (2) interrupts daily broadcasting and routine; (3) is preplanned; (4) has a large audience; (5) is considered obligatory to view; (6) excites the audience; (7) integrates society; (8) evokes a renewal of loyalty to the society and its legitimate authority (pp. 7-9).

examination of media events by media scholars Andreas Happ and Nick Couldry (2010) addresses this concern by emphasizing that while various genres of media events (including disaster marathons) remain useful for describing tendencies in the media industry, they are not necessarily confined to a specific communications technology (such as television or radio). Rather, they argue that was is core to the media event is its "centering performances" (Happ & Couldry, 2010, p. 12)— the nature of which remains "uncertain" and "contested" (p. 13) but are no less important to consider in the context of the specific event being studied. Online news sources (particularly those contained in the sample being examined) have developed various methods of dramatizing a disaster marathon—such as, for example, through the use of the word "BREAKING" at the beginning of a news headline, or moving the news story to the top of a news site, or a coloured banner to differentiate the story visually in some way in order to emphasize or draw attention to an event that is taking place.

Disaster marathons are generally associated with the reporting of terrorism, war, protest and natural weather events(Liebes, 1998), albeit greater scholarly attention has been paid to narrative techniques of terrorism and war. However, the narrative techniques associated with disaster coverage of weather events is no less important to consider because they are also heavily mediated sites of social, cultural, political and economic friction and/or unity. While climate change is changing the nature of severe weather—which has now become more frequent, more challenging to track and more catastrophic in consequence—old (newspaper and radio) and new media (including social networking sites) have also changed and become deeply embedded into the disaster experience (Cottle, 2014). The extensive reach of communication technologies across geographical distance, the accelerated (i.e. instantaneous) speed at which information can travel, as well as the increasingly

universal means of communications (e.g. mobile phones, social networking sites) invite us to consider the impact of these various transmissions in how disaster is experienced, and what different social and cultural meanings are inscribed within those experiences (Cottle, 2014, p. 17). In news coverage of Hurricane Katrina, for example, the media called to attention the largely invisible racial and economic qualities that have existed historically but were often unacknowledged (Cottle, 2014, p. 15). As was revealed by news coverage of Hurricane Katrina, weather-driven disaster marathons invite people to consider and confront other, related uncertainties (which can be local or global in scale)—including poverty, infrastructure and environmental collapse (Cottle, 2014, p. 9). Weather disasters offer journalists a great deal of latitude in determining who or what is to blame for the unfolding chaos. The conflict which arises in the wake of natural disaster can serve to unite or fragment political leaders and the public (Cottle, 2014). Unlike the original 'media event' narrative outlined by Dayan and Katz (1992), which serves to reinforce and legitimize the hegemony of the economic and political system, disasters signal a general loss of control by the government and thus they open leaders' credibility to being challenged (Liebes, 1998, p. 74-75). This enables journalists to step inside the news narrative and act as "watchdogs" (p. 75) to hold governments to account for the disaster.

This research will focus on three narrative features of the disaster marathon: (1) the strategic presentation of journalists as ordinary citizens who become heroes; (2) a sense that journalists have taken control over the event; (3) the opportunistic and exploitive presentation of witnesses. Previous research, like that by Zelizer (1990) and Robinson (2009), has demonstrated that these strong narrative elements prevail in public use and memory, even in light of conflicting evidence and witness testimony to the contrary. This is

because disaster marathons represent a unique genre of news in which journalists have traditionally wielded exclusive narrative control: a power which has also reinforced their authority as cultural storytellers more generally. The theoretical framework (Chapter 3) will provide a more elaborate description of these three narrative elements.

2.4. Research Question

Literature on the topic of journalistic use of social networking sites suggests that newsgathering practices are shifting to accommodate content from social networking sites. The literature review highlighted some changes previously identified by researchers, including: a renewed journalistic focus on the verification of gathered content, as well as a tendency of journalists to bolster their authority by focusing on the user-generated content which reinforces established news typifications. However, the increased popularity of social networking sites in recent years, coupled with increased adoption of mobile internet warrants a more in-depth look at the shifting nature of journalistic authority in breaking news situations—particularly in the context of disaster events; a reporting genre in which journalists have traditionally wielded exclusive narrative control. In light of these considerations, a more rich and contextual research interest emerges: *how do journalists curate social networking site content to assert narrative control over disaster marathons*?

The following section will investigate this research interest using a theoretical framework grounded in Tamar Liebes' (1998) theory of the disaster marathon. As this theoretical framework (Chapter 3) will outline, the journalistic rituals associated with contemporary disaster marathons (which are outlined by Katz & Liebes, 2007) provide a theoretical lens through which we can interpret the negotiation of narrative control (and hence journalistic authority) of weather-related events such as those described in the introduction.

3. Theoretical Framework

To begin investigating the research interest stated above, this research drew heavily from Liebes (1998) concept of the 'disaster marathon', which is understood in this paper as a kind of narrative typification for news coverage of real-life disasters. Traditionally, the media have retained exclusive control over determining when to switch into so-called 'marathon mode' and when the situation is deemed to have returned to normal (Liebes, 1998, p. 74). This is because, as Liebes (1998) has pointed out, governments and other public authorities have historically been unprepared to handle the immediacy of live news and are unable to deliver pertinent information, such as the declaration of a state of emergency, or other relevant information to the public in such a short period of time (Liebes, 1998, p. 75). Social networking sites like Twitter, Facebook and YouTube appear to present an opportunity for new voices to record, report and share breaking information with the public in ways that were previously unavailable. In answering 'how do journalists curate social networking site content to assert their narrative control over the disaster event', this research will consider how journalists' use of content from social networking sites reinforces (or counteracts) the disaster marathon narrative. To guide the research, this research focused on three well-established narrative elements of Liebes (1998) disaster marathon. They are: (1) the strategic presentation of journalists as ordinary citizens who become heroes; (2) the presentation of the government as woefully inadequate and; (3) the opportunistic and exploitive presentation of witnesses. The following paragraphs will provide more details on these three narrative elements. Other narrative elements of the disaster event, as outlined by Liebes (1998) are: (1) a sense that the environment in which the event is taking place has spiraled out of control; (2) a search for the culprit or someone to be held accountable for the chaos.

The first, and perhaps the most recognizable narrative element that emerges in the disaster marathon is the strategic presentation of journalists as ordinary citizens who become heroes. Previous research on news coverage of Hurricane Katrina found that journalists reaffirmed their authority over the collective memory of the disaster by casting themselves as ordinary citizens who became heroes and watchdogs (Robinson, 2009). This was made possible through the use of pronouns such as 'we' that are typically not used in day-to-day reporting. In such instances, the journalist steps outside of their normally objective position (Ettema, 1990; Littlefield & Quenette, 2007), allowing them to align themselves with their audiences as 'citizens' (Robinson, 2009). In answering how journalists curate social networking site content to assert their narrative control over the disaster event, this research will consider the extent to which journalists use content from social networking sites to self-reflexively communicate their work and the work of their colleagues. An example of this might be a journalist emphasizing how they continued their reporting from the scene despite the extreme conditions—a common refrain identified by researchers in news coverage of Hurricane Katrina (c.f. Robinson, 2009).

The second narrative element of the disaster marathon considered in this research is the sense that journalists have taken control over the event. Liebes (1998) suggested that the disaster marathon is created and authenticated by journalists, who take an active role in constructing the narrative of the event. This can be contrasted with Dayan and Katz (1992) media event, in which governments take control of the story, and the media merely provide a channel through which the message is transmitted. While the media event traditionally reinforces strong emotion and solidarity with the government and established order, in the disaster event, journalists have the latitude to cast blame—even on the government. Liebes

(1998), who focused much of his description on war and terror, suggested that the disaster marathon provides an opportunity for journalists to reflect on the role of government in a way that highlights underlying conflict, anxiety and argument (p. 76). However, since Liebes (1998) first defined the disaster marathon (and even since it was revisited in Katz & Liebes, 2007), governments and their affiliated organizations have made strides to adapt their communications strategies to keep pace with new advances in mobile technologies, such as social media. A 2012 Canadian Red Cross Survey outlined the social media habits of residents and emergency responders during natural disaster situations and signaled it as an effective strategy for communicating with and collecting information from residents. The report also suggested that social media could be used to communicate with the public in a way that circumvents news media, citing the use of Facebook by the Mayor of Iqaluit, Madeline Redfern, stating:

> "By sharing timeline information with her community through social media, Mayor Redfern can help dispel rumors before they spread. […] If misinformation is not corrected and it spreads like wildfire, then suddenly people are angry […] it's the difference between an informed public and a panicked one" (pp. 3).

In answering how journalists curate social networking site content to assert their narrative control over the disaster event, this research will consider the gatekeeping practices of journalists in selecting content from social networking sites for inclusion in news stories, and whether content from governments and their affiliated organizations (i.e. police and emergency service workers) is used to highlight conflict and anxiety, or whether it is used in other ways which counteract this narrative element.

The final narrative element to be considered is the opportunistic and exploitive presentation of witnesses. Liebes (1998), who originally described the disaster marathon in

the context of a 1996 bus bombing in Israel, described the use and recycling of particularly violent and chaotic images as characteristic of the disaster marathon—of which the intent is to "arouse anxiety and, at the same time, to provide the visceral pleasures of all soft-core pornographic genres" (p. 77). She goes on to suggest that repetition of such images simultaneously heightens their intensity while decontextualizing them (Liebes, 1998, p. 78). In the context of user-generated images, Lorenzo-Dus and Bryan (2011) observed that journalistic use of witness video footage appeared sanitized—often with audio elements removed to heighten intensity. Further, Lorenzo-Dus and Bryan (2011) observed that such footage often appeared without proper attribution to the creator, further adding to its decontextualization. In answering how journalists curate social networking site content to assert their narrative control over the disaster event, this project will consider the extent to which social networking sites were used to collect images and information from witnesses. Further, this research will consider the context in which witness-generated images and information from social networking sites appears, and the level of attribution granted to the authors of such content.

On the whole, Liebes' conceptualization of the disaster marathon urges us to focus on the ways in which journalists assert control over the narrative when reporting on disaster events. It enables us to consider how journalistic routines and conventions may have shifted—particularly those such as gatekeeping and narrative typifications, which have been previously identified in the literature. Thus, it will be an effective theoretical basis for exploring how journalists are continuing to assert their narrative control over the disaster event.

4. Methodology

This chapter will detail the methodological elements of this research project. It will begin by outlining why a case study method was selected, why the selected case was chosen, and explain how the case study exemplifies the disaster marathon outlined by Liebes (1998). It will then go on to explain how the research question was operationalized. Next, this section will outline the research design, which is composed of both a quantitative element (content analysis) and a qualitative element (multimodal discourse analysis). While the quantitative element was included to provide an indication of general trends in the use of content from social networking sites, the qualitative element will consider how the use of content from social networking sites contributes to the construction of the disaster narrative. It will then go on to outline the data collection method, including the source selection and sample selection for both methods. Next, it will outline the process of analysis for both of the chosen methods. Finally, this section will conclude with a discussion on research limitations. The researcher expects that these findings will contribute to a deeper understanding of contemporary news practices involving content from social networking sites.

4.1. Case study

Like media events, disaster marathons are most often examined in the context of a single case study, after which larger principles and generalizations about the genre are made. When first conceptualizing the disaster marathon, Tamar Liebes (1998) used news coverage of bus bombings that took place in Israel in 1996 to anchor her discussion of the disaster format. The case study format has also been used in other notable studies on the use of participatory journalism in news coverage (e.g. Lorenzo-Dus & Bryan, 2011; Robinson, 2009). For these reasons, a case study approach was deemed appropriate to the current study.

The severe flooding that occurred in Toronto on July 8, 2013 was constructed as a 'disaster marathon' as defined by Liebes (1998). While the aftermath of the flood proved to comparatively less catastrophic than other severe weather in recent years, including the Indian Ocean earthquake/tsunami (2004), Hurricane Katrina (2005) and the Sichuan Earthquake (2008), the unexpected and uncertain nature of the flash floods prompted many journalists to construct the event as a disaster marathon as it was happening and in the days following the event. The remainder of this section will highlight features of the July 8 flooding and resulting coverage as they relate to the disaster marathon criteria outlined by Liebes (1998) and reiterated in Katz and Liebes (2007). First, and most importantly—the floods in Toronto were not preplanned, nor anticipated. The floods were later regarded by Environment Canada and the Insurance Bureau of Canada (2014) as some of the most severe flash floods Toronto has ever seen. In less than 24 hours, the city received approximately 100 mm of rain[11]. The flooding wreaked havoc on low-lying areas of the city, particularly arterial transit routes along Lake Ontario. It affected the city's major transportation networks, including GO Trains, subway service, bus service and major highways such as the Don Valley Parkway through rush hour. As of November 2014, it is regarded as the most expensive natural disaster in Ontario's history, and is estimated to have cost approximately $940 million in damage[12]. Interestingly, no news network or environmental agency was able to predict the severity of the storm. This meant that few journalists were initially on the ground to survey some of the hardest-hit areas. As such, Twitter provided an important source of information for journalists and the public alike. As Liebes and Katz (2007) point

[11] The previous 24-hour record was 29 mm, and the average total rainfall Toronto typically receives in July is only 67 mm (The Weather Network, 2014).
[12] According to the Insurance Bureau of Canada (2014), which represents Canada's public and private insurers, the flood quashed the previous provincial record of $671 million, which was the cost of repairing damage from the August 19, 2005 flood.

out, the disaster marathon is enabled by mobile technology, which they say has endowed journalists with the content necessary to provide extended coverage of trauma. Indeed, this was the case in Toronto, as journalists encouraged participation on social networks by inviting users to share their photos and eyewitness accounts using designated, centralized hashtags, such as #TOflood and #TOstorm. This created a constant stream of updates that provided widespread, live witness accounts from across the city.

News about the flooding was shared across several local and national news networks— drawing the attention of audiences across Canada. At the time of the disaster, the theme of severe weather carried a great deal of salience for the Canadian public, as areas in Alberta had experienced disastrous flooding just a few weeks earlier[13]. As such, the Toronto floods garnered widespread news interest, and local as well as national news bureaus were quick to provide extensive coverage. Because Toronto is home to many local and national news bureaus, many journalists on the ground that were quickly mobilized as the situation progressed. Thus, a great deal of content from a variety of networks was available during and in the weeks following the storm. A search of eight major news networks in Toronto garnered 155 articles with some reference to the July 8 storm published between the storm on July 8, 2013 and July 19, 2013.

A necessary feature of Liebes (1998) disaster narrative is that the event is 'omnipresent' (p. 75) and all-encompassing—that is, the event interrupts routine programming to provide non-stop coverage of the unfolding narrative. Liebes (1998) had originally conceived of the disaster narrative in the context of broadcast news, where the stream of information could, indeed, be interrupted. In the context of the digital news

[13] The flooding in Alberta that took place in late June 2013 is currently regarded as Canada's most costly natural disaster at $1.74 billion (Insurance Bureau of Canada, 2014).

environment, however, what it means to be 'interrupted' is more ambiguous. A quick search of news station CP24 (an affiliate of CTV News) revealed that, between the beginning of the storm at 2 p.m. on July 8 and 11 a.m. the following day, the station posted (not including re-tweets), 102 tweets, 97 of which applied to the storm. This suggests the station was providing an inordinate amount of coverage on the storm compared to other news—signaling an interruption in the everyday stream of information.

All of the storm's factors—the steady stream of information, the interruption in the daily flow of events, the large and attentive audience and its unexpectedness contributed to define the event as a disaster marathon, as outlined by Liebes (1998). As the analysis (Chapter 5) will detail, the news texts were also considered in relation to more nuanced themes of Liebes (1998) disaster narrative, including that coverage of the event signals an overall loss of control and that the event allows journalists to step outside of their normally objective role. These aspects, although not immediately present in the case itself, were considered in the context of the news articles being studied.

4.2. Research design

The research question stated in section 2.4 asks how journalists are continuing to assert their narrative control over the disaster event. This question has been operationalized as RQ1 (below) to reflect the chosen case study. Further, sub-questions 1-3 will allow us to create a typology of the sample that considers the source of content in the case study, as well as how content was used and referenced. It is anticipated that the answers to these three questions will contribute substantively in answering RQ1. These questions are:

RQ1: How did journalists curate social networking site content to assert their narrative control over coverage of the severe flooding that occurred in Toronto on July 2013?

SQ1: Whose content was sourced in the news coverage?

SQ2: What was the function of the content in news coverage?

SQ3: In what manner was the content sourced in news coverage?

4.2.1. Content analysis

Bernard Berelson (1952), a pioneer in the method of content analysis, describes it as a "research technique for the objective, systematic and quantitative description of the manifest content of communication" (p. 147). Berelson (1952) argued that a focus on 'manifest' content rather than latent content could be used to combat a conventional desire to selectively choose texts for interpretation. While Berelson's (1952) conceptualization of content analysis continues to hold weight, it is often criticized for its focus on manifest content, rather than a text's implicit meaning (Krippendorff, 2004; Deacon et al., 2007)[14]. This research project has attempted to temper these methodological shortcomings by introducing a hybrid research model that uses a quantitative content analysis (measuring manifest content) with a qualitative discourse analysis that explores quantifiable trends in greater depth. In doing so, this research offers both a micro and macro answer to the research question.

[14] For example, according to Berelson's (1952) definition of content analysis, a researcher could count the number of times a text quotes a male engineer versus the number of times a text quotes a female engineer, but would not attempt to assess what the embedded or ideological meaning of those references are. In essence, Berelson (1952) omits from his definition the social and cultural meanings that are inferred but not necessarily apparent within a text. However, because such meanings are not always widely held, including them would risk the research being subjective.

The content analysis portion of the methodology will be used to address SQ 1-3 by providing an overview of what tweets were selected or curated by reporters for use in news coverage. This mirrors the research approach of Broersma & Graham (2013), who used content analysis to interpret trends in the use of content in social media in news texts over a four-year period. However, unlike Broersma & Graham (2013) who performed a content analysis on news articles from major news outlets in Europe over a four-year period, this research will use a content analysis to extract information about content from social networking sites as a news source in a single news event: the July 2013 floods in Toronto.

As a research method, content analysis is a compelling choice because it allows for the quantification and comparison of a large amount of information. The quantification of information, as in Broersma and Graham (2013), will permit reflection on the use of content from social networking sites at different points following the initial storm. Furthermore, the findings from this research may be compared and contrasted against Broersma and Graham's (2013) more comprehensive and longitudinal findings. While previous research has alluded to the significance of Twitter and other social networking sites in breaking news coverage (Newman, 2009), few have performed quantitative analysis on how content from social networking sites is used as a source in news articles (c.f. Broersma & Graham, 2012, 2013). Although a sizeable number (approximately 50) of articles sampled in this study meet the criteria for inclusion in the research sample, I concede that this is still relatively few to make any quantifiable generalization about the use of content from social networking sites as a source during breaking news coverage. However, the content analysis is useful for determining the use of social networking site content in this event-specific news context. Furthermore, the findings from the content analysis will contribute quantitative information

with which to answer RQ1, and will also be useful for contextualizing findings from the multimodal discourse analysis, which is outlined in more detail in the next section.

4.2.2. Multimodal discourse analysis (MDA)

While the content analysis portion of the methodology focuses on what is apparent across *all* of the news articles in the sample, the discourse component will access the embedded or implicit meanings in a single news article. This level of analysis is necessary because the textual and visual elements of the article combine to create a meaning that is not always explicit. For example, Lorenzo-Dus and Bryan's (2011) discourse analysis of disaster news coverage revealed that although the use of amateur mobile footage was prevalent among journalists covering the 2007 London bombings, the content often appeared with a high degree of visible and audial "coarseness" (p. 33), which the authors suggested contributed to the news reports' overall authenticity. Focusing on the quantitative presence of amateur footage may have missed such rich findings.

Multimodal Discourse Analysis (MDA) provides the analytic tools to shed light on how meaning is created when different modes (i.e. gestures, speech, images and writing) are combined into a single artifact (Kress, 2010, p. 32)[15]. The ability to consider visual as well as linguistic/verbal cues makes multimodality a useful lens for understanding how content from social networking sites (e.g. tweets, messages, image, video) are re-articulated in news coverage because it permits consideration of how the visual and structural elements of the news text communicate meaning that extends beyond simply the linguistic. As such, MDA is

[15] To demonstrate, consider the example suggested by Van Leeuwen (2004) of a magazine advertisement depicting a cat on a soft surface with the text "spoilt, spoilt, spoilt, spoilt", and the image of four cat tins. As Van Leeuwen (2004) explains, a textual analysis alone would provide little explanation of what the advertisement is trying to convey; however a multimodal discourse analysis would explore how the visual element of the cat, along with the verbal elements of the text, and the visual relationship between the two work together to create meaning (p. 12).

becoming a popular qualitative method to shed light on how content from social networking sites is being used by journalists and incorporated into various news formats (c.f. Allan & Thorsen, 2009; Lorenzo-Dus & Bryan, 2011; Chouliaraki, 2012). This research will consider how journalists re-articulate images and text from social networking sites when they are moved from their original context into news articles.

MDA has been used to study many kinds of phenomena. At the fundamental level, MDA is a "detailed exploration […] designed to reveal how knowledges are organized, carried and reproduced in particular ways and through particular practices" (Muncie, 2006, para. 1). This research utilizes Kress' (2010) multimodal concept of 'frames of meaning' to examine how journalists are re-articulating content from social networking sites in news coverage of disaster. 'Frames' indicate which entities in a communication artifact belong together and which should be separated, and as such, they serve to connect or disconnect ideas, objects or opinions. An example might be the use of pronouns that indicate 'us' or 'them', which would imply that a differentiation between frames is being made. As Kress (2010) explains, frames are crucial instruments of communication, writing:

> "Without a frame, we cannot know what to put together with what, what to read in relation to what. If we do not know what entities there are, we cannot establish relations between them. We cannot know therefore where the boundaries are to interpretation: we cannot make meaning" (pp. 149).

Frames are especially useful for examining multimodal objects, because they exist in all modes, including film, text and images. 'Frames of meaning' will be especially useful for examining how journalists create meaning using content from social networking sites because the news article being studied contains both images and text, and presumably boundaries or 'frames' which demarcate between the amateur and professional, journalistic content. 'Frames of meaning' have been similarly useful for analyzing how broadcast

journalists authenticated their own coverage using amateur mobile footage from a terrorist attack (c.f. Lorenzo-Dus & Bryan, 2011).

4.3. Data Collection

Articles were collected for this research project through a combination of the search engine 'Google' and a search on the individual news publication websites with the key words "Toronto" and "flood". Although the specialist database LexisNexis was available for sample collection, using this search tool proved to be difficult, as it does not contain all aspects of the news story (e.g. the full number of images selected or curated by the journalist or editor). Moreover, LexisNexis does not currently maintain the journalist or editor's 'Storify' (a list of curated tweets), which are uniquely important to include in the context of this research. Although the internet search method of data collection has these merits, it also has limitations. While most stories have a time and date stamp for the first/last edits, not all versions are available for study. Moreover, it is not clear if the full range of articles is available at time of sampling. Despite these limitations, I am satisfied that the collected data enabled a rich analysis in line with the research questions. The collected articles were saved virtually as PDFs. Basic information about the articles was also documented, including the title of the article, the name of the news outlets and the name of the author. In total, 150 articles about the storm were collected from eight news outlets, of which 51 contained a reference to content from a social networking site (e.g. by the article explicitly stating so, or by displaying content directly from a social networking site, such as through Storify). A list of these articles is provided in Appendix C.

4.3.1. Source selection

The content analysis portion of this research surveyed the population of online news articles produced by organizations with bureaus and/or paid staff in Toronto that produced coverage during and in the aftermath of the July 8, 2013 flooding that occurred in Toronto. In total, this research sampled articles from eight news outlets, which were pre-selected as they represent a variety of Toronto's most closely followed daily news, which included national, provincial and local news outlets—all with bureaus in Toronto. Moreover, these news outlets were selected because they maintain a strong online presence, which was necessary because only online, text-based news articles were analysed. This decision was made due to time constraints, and the relative ease of searching texts for key words in digital format. This included four newspaper-based news sources—two of the region's most popular daily local newspapers: *The Toronto Star* and the *Toronto Sun*; and two of the region's most popular national papers: *The National Post* and *The Globe and Mail*. Text articles from three other major broadcast news outlets based (or with bureaus) in Toronto were also included in the sample: *Global News, CTV News* and *CBC News*, as well as articles from the online news website *Huffington Post Canada* were also included[16]. These news outlets were selected because they have fairly wide distribution in the Greater Toronto Area. In using such a wide but geographically-centralized selection of news sources, this research hoped to capture the breadth of journalism practices in Toronto while at the same time choosing sources that are typically consumed by citizens in Toronto.

4.3.2. Sample selection

[16] Huffington Post Canada is a subsidiary of the successful American blog and news website Huffington Post. A recent addition to the Toronto news scene, it was launched in 2011 after establishing a permanent headquarters in downtown Toronto. The news site brands itself as a 'curation' website, though it has also been criticized as being merely a news aggregator, but it also employs a number of journalists and bloggers to write original content.

To collect information to answer SQs 1-3, only articles containing some reference to social networking site content (i.e. through the use of Twitter, Facebook, YouTube, etc.) were selected for inclusion in the sample. Articles were individually studied, and content that was explicitly said to have been gathered from social networking sites were coded according to the amended coding structure, which was adapted from Broersma and Graham's (2013) longitudinal research on the use of Twitter across all news genres (this amended coding structure as well as the original is provided in Appendix A). Liebes (1998) offers no criteria for circumscribing the length of a disaster marathon; however, news coverage of the disaster appeared to drop off significantly after July 19: 11 days after the storm. These eleven days of coverage include the vast majority of stories immediately following the flooding, as well as subsequent opinion-editorials and follow-up coverage. The few articles published after July 19 did not appear to add value to the sample because they were written about another subject and only loosely connected to the disaster itself (e.g. one was written about selecting house insurance) and this research is specifically concerned with the ritual and routine associated with news coverage of the event itself.

Two different sampling methods were used against the total population of news articles, corresponding to the two different methods employed in this research project. All 51 articles containing some reference to a social networking site (e.g. Twitter, Facebook, and YouTube) were included in the sample for the content analysis. However, only one article was sampled for the discourse analysis. Such a small sample is typical of MDA methodology (Machin & Mayr, 2012, p. 207). In this study, the news text—an article from the Globe and Mail (see Appendix B)—was selected because it possessed a high number of the most popular attributes established by the discourse analysis. For example, the article used content

from three of the most popular sources of content, which were identified to be witnesses, public sector organizations and vox populi. The article also used three of the most popular techniques for incorporating the content from social networking sites into the article, including using an image of the content, paraphrasing the content, and directly quoting the content—offering an opportunity to examine how these different articulations of the content affected its meaning. Basic elements of the article are as follows:

Format	Digital
Source	The Globe and Mail (online)
Article Title	"GO Transit, Emergency Management criticized for communication during Toronto flood"
Author	Nicole Bogart (staff reporter)
Date published	July 9, 2013; 2:14 p.m. (original) July 9, 2013; 5:02 p.m. (update added)
Word count	834

The sample for the discourse analysis, then, would be considered a non-random, theoretical sample (Deacon et al., 2007). According to Deacon et al. (2007), the theoretical sampling method seeks articles that are most likely to extend and confound emerging hypotheses (p. 54). The analysis (Chapter 6) is structured to reflect this, with the content analysis preceding the qualitative discourse analysis.

4.4. Process of analysis

4.4.1. Content analysis

The content analysis portion of the research focuses on providing answers to SQ1-3 (which contribute, in part, to answering RQ1) by quantifying certain aspects of the journalistic use of content from social networking sites. More specifically, the content analysis will identify the common sources of content (i.e. witnesses, public sector stakeholders, politicians, other

journalists), as well as how content was used in the story and the manner in which it was sourced. It is anticipated that these findings will allow us to evaluate the presence of the three narrative elements commonly associated with the disaster marathon—the strategic presentation of journalists as ordinary citizens who become heroes, the presentation of the government as woefully inadequate and the opportunistic presentation of witnesses.

The coding structure for the content analysis was heavily based on the coding structure used in Broersma and Graham's (2013) longitudinal research on the use of Twitter as a news source in Europe (see Appendix A for the original and amended coding structure). As in Broersma and Graham (2013), the unit of analysis in this portion of the research was the individual content from social networking sites, and the context unit of analysis was the article in which it appeared. First, the content was coded for the manner in which it was sourced (i.e. was the content quoted, paraphrased, included as an image, or included in a Storify?). Although this coding category was used in Broersma and Graham (2013), some variables were added to reflect an increase in the variety of ways in which content from social networking sites were sourced in the sample—these additions were (1) sourcing by including the content as an image and (2) sourcing through the use of Storify (a tool which allows journalists to curate a personal stream of content). Both of these sourcing methods are distinct in that they offer journalists a way to visually distinguish content from social networking sites from the rest of the article, and for this reason they are important to consider as a distinct technique for sourcing content. Next, the content was coded for the function that it serves within the article. Broersma and Graham (2013) outlined four functions—(1) as part of a question-and-answer exchange between journalists and social media users; (2) as a standalone tweet with no context offered; (3) as a trigger for a larger news story and; (4) as a

way to illustrate a larger trend. A fifth function—providing updates or additional information (e.g. a police agency providing an update on a road closure)— was added to reflect the category of news being studied: disaster marathons. Finally, the content was also coded for the type of author that was sourced. Broersma and Graham (2013) outlined 14 variables for this category (see Appendix A for full their full list). For this research, 'Vox populi' (or vox pop) was used to categorize references to people who were cited for their general thoughts or opinion, whereas witnesses was only used to categorize instances when a reference was made to original, first-hand accounts from the storm. This differentiation was necessary because vox pop typically does not add value to the wider story or debate (Dekavalla, 2012), whereas firsthand witness accounts in this story provided unparalleled access to scenes not immediately accessible to reporters (e.g. a photo from the window of a flooded train). Moreover, an additional variable of 'public sector stakeholder' (i.e. police organizations, hydro organizations, and transit organizations) was added to reflect the category of news being studied (disaster marathons). These categories were found to be inclusive and, as such, the content analysis component is considered to be structurally deductive. Each of these categories confronts a separate sub-question (SQ 1-3) that, together, will provide a quantitative basis from which to answer RQ1, which considers how content from social networking sites was used as a news source. The resulting data tables for the coding categories are contained in Appendix D.

As mentioned, the news texts were studied according to their explicit use of social networking sites as a news source. A limitation of this model of analysis, as also noted by Broersma and Graham (2013), is that this model can only analyze content from social networking sites that has been explicitly stated as such. This form of analysis cannot, for

example, analyze content that led journalists to other sources of information. As such, this research was focused specifically on the use of content that was explicitly associated with content from social networking sites. This includes tweets that were made by journalists and news organizations, if they were presented in the news article as sources[17].

4.4.2. Multimodal discourse analysis (MDA)

As mentioned earlier, because MDA can be used to study a multitude of different media (e.g. geography, music, sitcoms, news, etc.), there is no single prescribed way to carry out an MDA. The MDA performed in this research relied greatly on the methods employed by Lorenzo-Dus and Bryan (2011), who examined a similar phenomenon but in the context of television broadcasting. Drawing on the many discourse analytic methods outlined in Machin and Mayr's (2012) and Kress (2010), the sampled article began by identifying devices that may be used to create a 'frame of meaning'. 'Frames of meaning' (or simply, 'frames') are used to indicate boundaries and connections between ideas, objects and positions; those which exist within the frame are intended to share some connection or unity, whereas objects outside the frame are said to be separate from those inside the frame. Assessing a text for its use of frames can help draw out meaning that is not obvious or explicit. The devices used to create frames vary depending on the mode being analyzed[18]. As Kress (2010) points out, some framing devices are more conventionalized than others. Online news articles, for example, contain a number of commonly identified framing devices, such as the use of a red banner to demarcate 'breaking' news.

[17] The self-reflexive use of Twitter by journalists was considered in the analysis in Section 5.3.
[18] For example, in a written text, a frame might be created using punctuation; an illustration may use colour; a photograph may use lines (Kress, 2010, p. 150-1).

Like Lorenzo-Dus and Bryan (2011), this research project began by identifying 'material' means for framing in the sampled article. Material means of framing depend heavily on the mode being analyzed but can include elements of colour and layout which demarcate a boundary (Kress, 2010, p. 152)[19]. With respect to material frames, this research revealed the use of fonts, boxes and frames to differentiate between content from social networking sites and the written body of the article. Next, the sampled article was analyzed for 'generic' frames. Unlike material frames, which generate meaning through the structural elements of a text, generic frames—which are genre-specific, create boundaries and connections between social relationships. Generic frames are genre-specific and are necessary to "navigate the world of institutionally produced knowledge" (Kress, 2010, p. 152)[20]. With respect to generic frames, this research revealed various visual and verbal cues that indicate the level of agency they are said to possess.

After coding the generic and material frames in the sampled article, clear themes emerged, which were then linked to the three larger narrative themes associated with disaster marathons (outlined in the theoretical framework). These findings were then used to answer RQ1 which, again, focuses on *how* journalists curated social networking site content to assert narrative control over the disaster marathon. More specifically, the MDA was useful for revealing the visual and linguistic techniques that were used to integrate the social networking site content into the journalistic narrative. Moreover, the MDA was useful for discerning implicit meanings that were applied to the social networking site content and to the participants involved in the creation of such content.

[19] Other material means of framing might be the use of white border around a page, open spaces around a building, or the curtain rising or falling between the acts of a play (Kress, 2010, p. 152)
[20] For example, Kress (2010) suggests generic frames are employed to help us experience various social interactions and scenarios, like the cues we receive in an interview which indicate a conversation has moved to a cross-examination (p. 152).

4.5. Limitations of chosen research design

While some of the limitations of this research project have been alluded to in earlier sections, the following paragraphs will draw attention to some of the key limitations of the chosen research methods as they pertain to this specific research project. In doing so, this section will highlight why the decision was made to continue with these methods given these limitations.

In the context of this research, the content analysis serves the purpose of making visible certain repetitions or tendencies across all of the sampled texts that might not otherwise have been noticed or confirmed. The content analysis portion of the text, however, cannot be generalized beyond the reach of the population being studied (which were outlined in Section 4.3). As the population of articles is limited to online news, the content analysis cannot, for example, make any generalizations about the use of content from social networking sites in television news coverage during the same disaster, even if that coverage was produced by the same news outlet (e.g. CBC). Moreover, the content analysis is expected to offer little opportunity to critically examine or evaluate these tendencies beyond what was outlined in the coding structure. For example, the content analysis may reveal that a certain category of social networking site users was sourced more often in news texts, but one would be hard-pressed to draw any further conclusions about the context in which users' content appears (e.g. their level of agency or the extent to which the content is sanitized). Thus, although the content analysis allows us to consider the entire sample of articles, it still lacks emergent details—like how the linguistic and visual elements of an article combine to create meaning. To combat this limitation, findings from the content analysis were balanced with a qualitative research component—a multimodal discourse analysis, which sought to

analyze a single text and draw out how meaning was generated in that text. In an ideal research situation, such time and attention could be dedicated to *all* of the articles sampled in the quantitative analysis—indeed, having been written by several different journalists, from several different news organizations, at several points in the development of the disaster marathon, it is likely that each article would elicit uniquely rich and insightful points for discussion. Unfortunately, the time and resources required to undertake this in-depth level of analysis would be understandably prohibitive.

Again, methodological limitations emerge in relation to the generalizability of the text selected for the MDA. This research attempted to choose a text that was representative of the larger sample by selecting one that contained many of the more popular elements (as indicated by the content analysis), though it has been argued that a single text, or even a handful of texts cannot be representative of an entire discourse (Machin & Mayr, 2007)—as such findings from the MDA cannot be generalized to the entire sample. However, what the MDA component lacks in generalizability it compensates for in depth, offering an opportunity to consider how visual and textual elements work together to generate meaning. As Allen and Thorsten (2011) suggest, scholarship in the area of the 'participatory vs. amateur' debate is lacking, and is too often regarded and debated as a 'rigid, zero-sum dichotomy' (in Lorenzo-Dus & Bryan, 2011, p. 37), which has led to calls by Lorenzo-Dus and Bryan (2011) to inject the area with more rich, discourse analytic methods to understand the many discursive practices taking place.

A different method, which could illicit different answers to the principal research question (RQ1) 'how was content from social media recontextualized by journalists?' could be interviews with the journalists to assess their journalistic practices and routines when reporting on disaster. Of course, the challenge with interviewing any participant is assessing

the sincerity of their answers. This is especially true in this context, given that many news organizations pride themselves on producing objective, unbiased reporting. Further, it should not be overlooked that journalists might not be fully cognizant of all the decisions (and the reasons for those decisions) that go into producing their work. Working with the text firsthand through both content analysis and discourse analysis elicits findings that are more unobtrusive than working with interview subjects.

5. Results and analysis

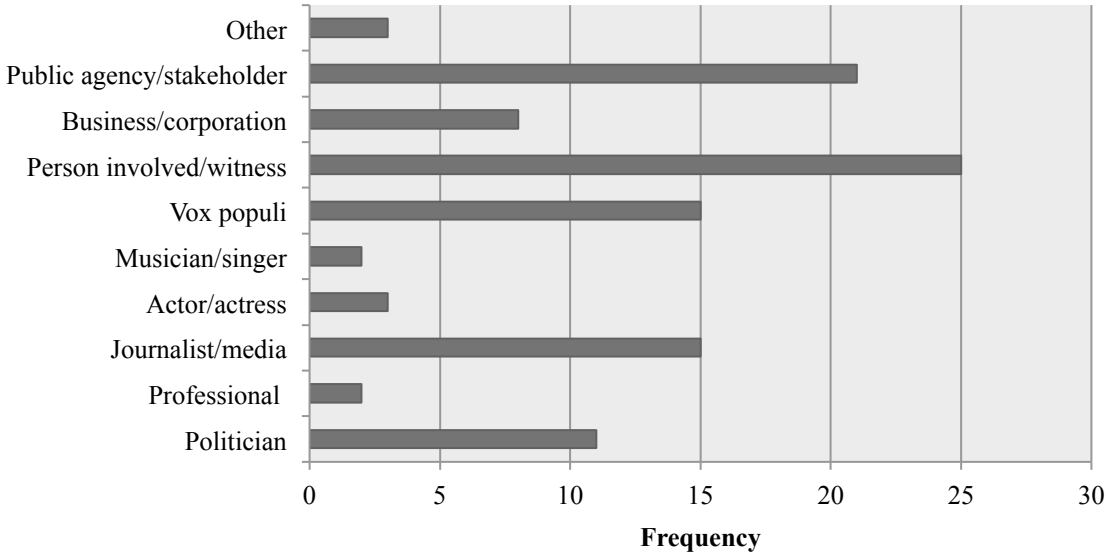
This section will provide an initial overview and explanation of the findings from the content analysis (sections 5.1-5.3) and the MDA (section 5.4). In doing so, it will highlight certain findings for further consideration in the discussion that follows. With respect to the content analysis, the findings from this research mirrored many of the quantitative trends previously identified in Broersma and Graham (2013) (e.g. a focus on content from 'elite' members of society), however this research also identified unique trends in the data that reflect the distinct narrative of disaster events. The MDA also generated rich findings with respect to the material and generic framing that will be useful in evaluating the degree to which journalists exercised narrative control over the disaster marathon.

5.1. Sources of content from social networking sites

This coding element, like the others, was initially based on the categories found in Broersma and Graham's (2013) longitudinal study, but were revised to reflect the different categories present in this case study. As Fig. 1 illustrates, the most popular sources of content were those of public organizations—a category that was not identified in Broersma and Graham's (2013) sample. This category included content from police agencies, utilities and transit authorities that were relaying information to the public using the social networking sites. The

context in which the organizations appeared in the news was most commonly to provide updates or information—for example, a Huffington Post (July 8, 2013) article stated: "Toronto police said in a tweet that they were responding to rescue-type calls and warned residents to stay away from flooded streets." This seems to represent a departure from the typical 'disaster marathon' outlined by Katz and Liebes (2007) in which the government is depicted as chaotic, mismanaged and non-credible. Interestingly, this narrative seemed to reappear when a public organization (or politician) had an inadequate presence on the social networking sites during the storm. A Global News article ('GO Transit, Emergency Management, criticized for communication during Toronto flood', 9 July 2013) denounced the regional transit agency for 'signing off' at the height of the storm. Similarly, Toronto Mayor Rob Ford was criticized for tweeting incorrect information during the storm, with one article reading: "Ford's criticisms came when the Toronto Mayor Ford Account tweeted that the worst was over hours before the rainfall peaked, using the wrong measurement for rain, and deleting the tweet soon after" (Global News, 2013 July 9).

Fig. 1: Whose content was sourced?



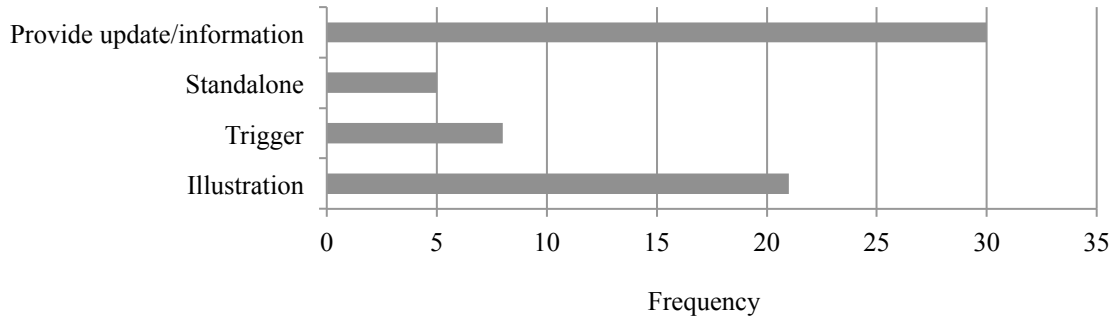
The data also shows that journalists frequently used content from witnesses, who contributed information, updates, images and personal accounts of their experiences on social networking sites during the flood. A select few remarkable eyewitness accounts were widely circulated amongst many news agencies: one being a tweet of the Ferrari that had been abandoned in the floodwaters, another was eyewitness accounts of a snake that had managed to swim aboard a flooded commuter train. This is consistent with Lorenzo-Dus and Bryan's (2011) analysis of user-generated footage from the 2005 London bombings, which found that a few mobile images and videos were reused amongst news agencies to commemorate the disaster marathon. This further supports Liebes' (1998) suggestion that images from disaster marathons are recycled and "tightened to retain only the juiciest lines" (p. 77). Fig. 1 also illustrates that a great deal of attention was given to 'vox populi'—an umbrella category that was also used in Broersma and Graham's (2013) coding structure. This category included instances where journalists referred to groups of users on social networking sites as a single collective, as the Huffington Post (July 9 2013) did when they wrote: "Last night plenty of people on Twitter joked that Calgary's mayor Naheed Nenshi should come to Toronto to help manage this disaster". The significance of vox populi in this sample will be given further attention in the multimodal discourse analysis (detailed in section 5.4). Finally, it is interesting to note that the sample also indicated a high number of journalists featuring social networking site content from themselves or fellow journalists, the significance of which will be highlighted in the Discussion (Chapter 6).

5.2. The function of Twitter as a news source

As Fig. 2 illustrates, the content analysis noted that content sourced from social networking sites could be categorized as having one of five functions within the sample of news stories.

Overwhelmingly, these functions tended to fall into two main categories, which were (1) to serve as an illustration of larger trends and (2) to provide updates. Broersma and Graham (2013) similarly identified 'illustration of larger trends' as one of the more popular uses of social networking sites as a news source. In this research, the use of social networking sites added little value to the story, other than to personalize or localize the event using social networking users as an alternative to vox pop. In many of these cases, social networking site users were characterized by journalists as having the same ideas and experiences. For example, the Huffington Post (July 9 2013) referred to content from Twitter as a sort of vox pop, writing "Residents have taken to Twitter to express their confusion about Toronto Hydro's use of the word 'rolling' blackouts, frustrated as to why the power is taking so long to come back on." These findings are consistent with the contours of Liebes (1998) disaster marathon narrative, which states that individual experiences or reactions from citizens are typically only included insofar as they suit the larger news narrative (i.e. the failing of institutions and public authorities).

Fig. 2: What was the function of the content?

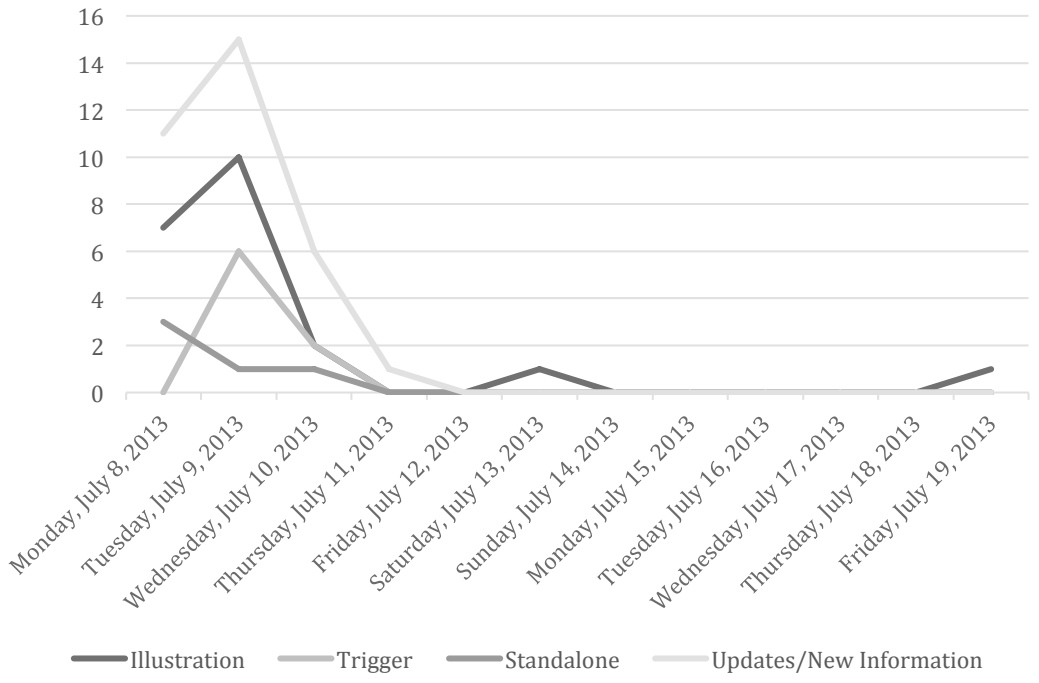


Interestingly, the most popular function of 'providing updates' was not identified as a category in Broersma and Graham's (2013) longitudinal study from 2008-2011. This could be because of several reasons. It may be the case, for example that this could be the result of

having focused on disaster coverage, which, as previously mentioned, is a distinct news genre in which the voice of journalists rises to prominence to provide key updates and information. Similarly, it could be that news audiences have become accustomed to social networking sites as an acceptable and reliable source of information. More likely, however, is that now official news sources (in this case governments, utilities and transit agencies) have established Twitter or other social networking presences in addition (or as an alternative) to more conventional press releases to distribute information and updates.

Fig. 3 charts how these functions fluctuated during the course of the disaster coverage. As the chart demonstrates, the most popular function of 'providing updates' generally remains the most popular function of content from social networking sites, particularly in the first few days, but drops dramatically as the coverage progresses. Interestingly, trigger tweets (tweets that incited their own news stories) were not identified in the news coverage until the following day. These included particularly remarkable stories and images, including one that emerged about a Ferrari that was waterlogged and abandoned as well as a story about a snake that swam aboard a GO Train. While this information was already circulating on Twitter during the storm, it wasn't until the following day that news outlets gave these stories attention with news coverage. This signals that news agencies are able to manage and prioritize content from social networking sites.

Fig. 3: Functions of social networking content over time

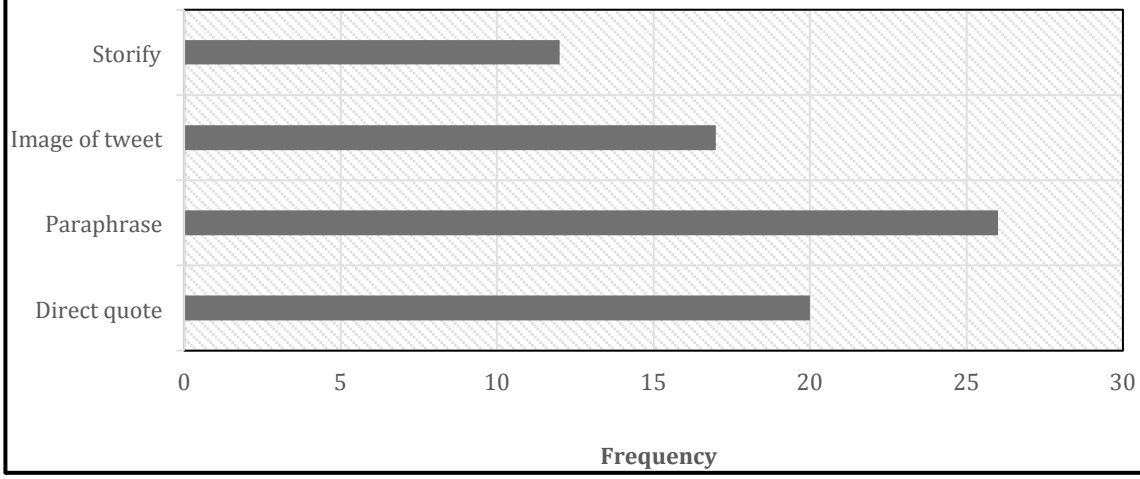


5.3. Quoting patterns

As Fig. 4 illustrates, the content analysis revealed that content from social networking sites was integrated into the news texts most commonly through the use of paraphrasing the content. This category 'paraphrasing' included news stories where the original content (and often-times, the author) were not apparent in the news story. Rather, the journalist or editor had provided a general description or overview of the content from the social networking sites (e.g. "Peel Regional Police tweeted a number of intersections where officers are directed traffic Tuesday morning", Globe and Mail, 2013). Broersma and Graham's (2013) study assessed the quoting patterns of content from social networking sites using only two categories (paraphrase and direct quote), but this study added two categories: quoting through the use of Storify and quoting by capturing an image of the tweet. These categories could also be classified as a distinct form of direct quote. Yet, even taking into consideration

the use of these two quoting methods, there are some discernable differences between this small sample of articles and the longitudinal Broersma and Graham (2013) study that are worth highlighting. In the Broersma and Graham (2013) study, direct quotes were the most common way to source content, with 92% of articles using the direct quotes as opposed to paraphrasing. Even if Storify and image captures are included in the direct quote coding category of this sample, paraphrasing is a citation method used in approximately 34.6% of news articles—a much larger share of the sample than in Broersma and Graham (2013).

Fig. 4: In what manner was content from social networking sites sourced?



Broersma and Graham (2013) speculated that direct quotes might have been more popular in their sample because journalists were acting cautiously about the content and downplaying their own responsibility for the information from social networking sites (p. 455). The change in this sample may suggest that journalists are asserting control over the narrative by interpreting and paraphrasing content from social networking sites. It also appears that in the context of the disaster marathon, journalists are willing or able to take greater risks in relying on the veracity of content from social networking sites.

5.4. Multimodal discourse analysis

5.4.1. Material framing

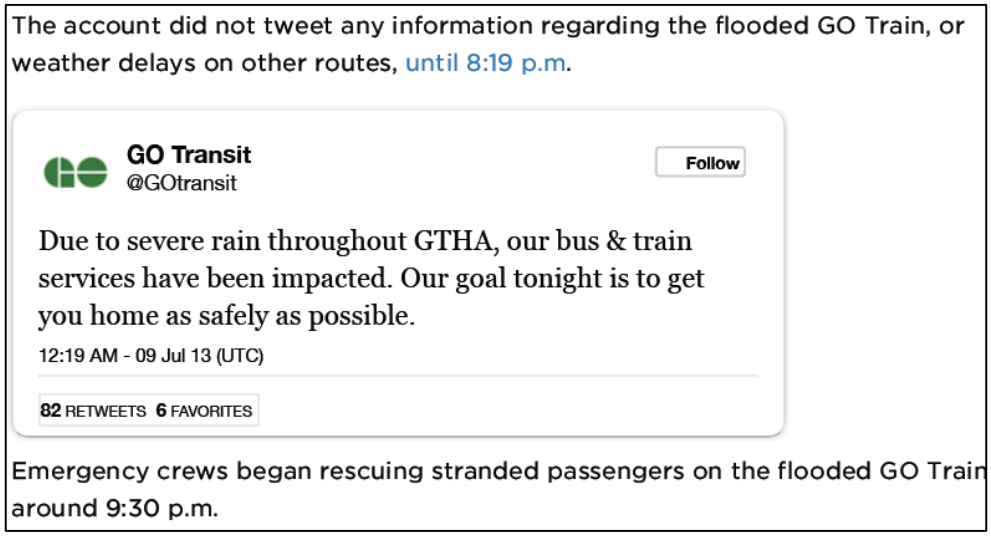
Means of framing can be broadly separated between the material and the generic. To reiterate, *material frames* are those that indicate boundaries between semiotic entities, whereas *generic frames* indicate boundaries between social relations (Kress, 2010, p. 151). In both cases, the frame serves to disconnect or connect elements, communicating that elements within the frame share some unity, while those outside of it are somehow disconnected.

Lorenzo-Dus and Bryan (2011) identified two main material ways of framing content from social networking sites: (1) by directly 'projecting' the content from social networking sites into the article and; (2) by embedding the content into other material resources within the overarching frame, such as a television broadcast that depicts an image of a newspaper headline (p. 30). The news article analyzed in the MDA only utilized direct projection means of framing, which means that the journalist writing the article retained complete control over which content to select, and how it should be interpreted.

The material means of framing included two instances where an image of a tweet was pictured and one instance where a YouTube video was pasted into the online article. The visual demarcation of the two tweets is particularly interesting (one is pictured in Fig. 5) — both of the tweets could be categorized (as they were in the content analysis section 5.1) as being sourced from stakeholders in the public domain: GO Transit and the City of Toronto's Emergency Management. In both cases, the tweets— which were comprised entirely of text— are clearly demarcated from the other text through the use of borders and shading that appear to 'pop' from the page. The tweets are further demarcated through the use of size, appearing slightly larger than the text in the body of the article. These framing elements

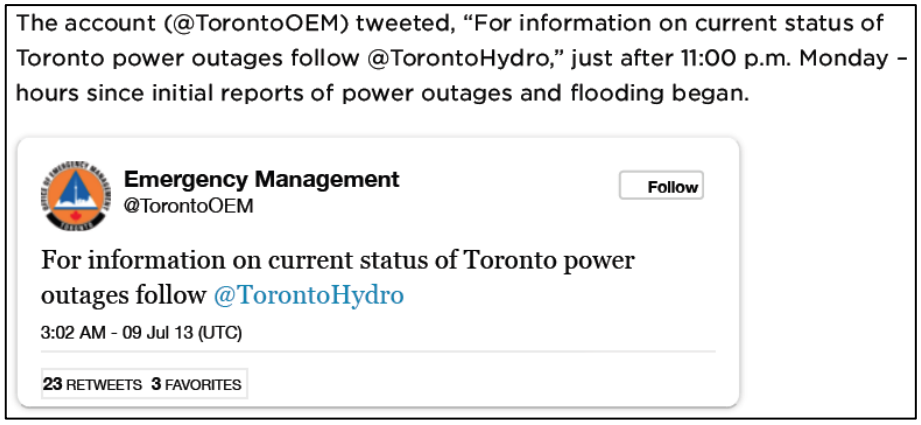
signify the tweets' disconnect from the remainder of the written article, and the strength of these framing elements further dramatizes the communicative gap that exists between the tweets and the written article (Kress and van Leeuwen, 2006, p. 203).

Fig. 5: Screen shot from article depicting visual demarcation of tweets



In both cases, the image of the tweets was further framed by the written text that preceded the image. For example, the article reads: "The [Emergency Management] account tweeted, 'For information on current status of Toronto power outages follow @TorontoHydro,' just after 11:00 p.m. on Monday – hours since initial reports of power outages and flooding began," (Global News, 9 July 2013). In this passage (pictured in Fig. 6), the Emergency Management response is implied to be inadequate, though this is not explicitly stated. This is achieved through the use of punctuation to create the frame. In this case, a dash connects the content of the tweet in relation to the timeline of the flooding. As Kress (2010) maintains, punctuation is an understated but powerful means of connecting entities to create meaning.

Fig. 6: A screen-capture of the visual and linguistic framing of the tweet from the Toronto Emergency Management account



5.4.2. Generic framing

Unlike material framing, which indicates boundaries between semiotic entities, generic frames indicate boundaries between social relations. An analysis of these 'general' frame mechanisms reveals how the news article uses frames to position social actors in relation to one another. This section will begin by describing several instances of nominalization which were used to conceal or diminish the role of the social actors. Nominalization, according to Machin and Mayr (2012) "typically replaces verb processes with a noun construction, which can obscure agency and responsibility for an action, what exactly happened and when it took place" (p. 138). This was observed in four instances that depicted social media users interacting with content (Appendix B contains full article). For example, the article reads: "[…] Toronto's Office of Emergency Management came under fire for only tweeting once during the storm" (Global News, 9 July 2013). In this case, it is not immediately clear who is generating the complaints about the Office of Emergency Management. The removal of the active agents—which is implied (and later clarified) to be social networking site users—has the effect of making the complaints seem as though they 'just happen' (Machin & Mayr,

2012, p. 140). Nominalization is also reinforced through the user-generated image, which was taken from Twitter and appears at the beginning of the article. The image, which was said to be collected from a user on Twitter, is a high-angle shot from the window of a flooded GO Train, and offers (literally) a window looking out onto the chaotic scene. Kress (2006) suggests that such subjective imagery can be understood by what is *not* pictured (p. 143). While this photo offers an expansive and dramatic view of the scene, the photographer and fellow passengers are obscured. What's more, the text in the article (which was not published until the following afternoon) offers no resolution on how the photographer managed to escape the train, or how long they waited until help arrived. The image and the (lack of) accompanying text permit a privileged perspective that allows the most sensational and visceral aspects of the scene to be consumed without regard for the well-being of those involved. Such detached yet dramatic images—what Liebes (1998) equates to a form of voyeurism—are characteristic of the disaster narrative.

Further, the analysis noted six instances in which the news agency was positioned as an active participant primarily through the use of the verbal process "to contact", as in "Global News contacted media relations at GO Transit on Monday evening and none of the three information phone numbers were answered" (Global News, July 2013). In this example, *Global News* is positioned as the *sayer*, which according to Machin and Mayr (2012) indicates the most active role in a verbal process (p. 110). In this same example, GO Transit takes on the role of the *receiver* of Global News' requests, despite not actually responding to the request—a relative position that is repeated several times throughout the text. Although users are also positioned as *sayers*, as in "Tweets to GO Transit ranged from sarcastic […] to angry" (Global News, 9 July 2013), the reception by GO Transit is not

acknowledged in the article, which reduces the strength of their agency as speakers, particularly when compared to Global News.

Interestingly, the social actor which appears to receive the *least* amount of agency, despite being implicated in the first line of the article— "During the height of the storm, Toronto residents took to social media to scour the web for updates and information about everything from power outages to transit troubles" (Global News, July 2013)— is the *Twitter audience*. Their representation at the outset as a single collective is only sparsely alluded to in the remainder of the article. For example, at one point "those following the storm on social media" are said to "criticize'" GO Transit (Global News, 9 July 2013), but no evidence is presented in the article to illustrate this. This can be categorized as a form of ventriloquizing—a technique in which a claim is attributed to a social actor, but no evidence is provided to support the claim (Dekavalla, 2012, p. 301). Unable to describe their thoughts or reactions under their own terms, Twitter audiences in this article possess little agency over how they are depicted.

6. Discussion

The findings from both the MDA and content analysis indicate that content from social networking sites was used to develop some of the typical narrative elements of the disaster marathon. Drawing from these findings, this section will summarize and contextualize the use of content from social networking sites in relation to the disaster marathon theme which, as previously outlined in Chapter 3, outlines the ways in which journalists assert their narrative control over the disaster incident. To guide the discussion, this section will focus on three central themes of the disaster marathon, and how the use of social networking sites contributed to developing these themes. They are: (1) the strategic presentation of journalists

as ordinary citizens who become heroes; (2) presentation of the government (and, in this case, affiliated public organizations) response as woefully inadequate and; (3) the opportunistic and exploitive presentation of witnesses.

6.1. Presentation of journalists as ordinary citizens who became heroes

News scholar Simon Cottle (2013) offers the suggestion that contemporary journalism is reflexively communicated within news texts during and following disaster marathons so as to authenticate the journalists' testimony and experience, writing that communicating their physical presence at an event:

> "[H]elps grant the accounts of witnesses and their authenticity and imputes the moral responsibility to recount to others what has happened in the experiential terms of having been there, of having felt, seen and survived" (pp. 234)

Robinson (2009) observed the use of self-reflexivity in journalistic accounts of the Hurricane Katrina disaster, noting that journalists frequently emphasized their own 'bravery' and 'persistence' in news stories, often by employing the pronoun 'us' to reveal themselves and their newsgathering techniques to the audience (Robinson, 2009, p. 802-3). Similar techniques were observed in this research. The content analysis found that journalists integrated their own content (first-hand accounts and news gathering techniques) via social networking sites in nearly a third (29.4%) of articles. Often, this was through the use of Storify, which depicted journalists in action, tweeting from the scene or providing updates alongside witnesses, who were also on site. One article, for example, reads:

> "Things took a turn for the worse for Ford when Toronto Sun reporter Don Peat described Ford's location during the storm: [image of tweet from @reporterdonpeat that says 'Just spoke to Mayor Rob Ford, power is still out at his house. He's in SUV with his kids trying to stay cool #TOpoli #stormTO']" (Global News, 9 July 2013).

Conversely, the MDA highlighted the extent to which content from social networking sites was implicated as an ineffective way for the public to hold organizations to account. In the text, this is observed through a contrast in the way in which journalists are described as "contact[ing]" transit agencies for a response, whereas social media users are described in the less-forceful language of "criticiz[ing]" the transit agency— neglecting that social media also represents a direct form of communication that could also be used to contact transit agencies. Thus, while both journalists and social media users made attempts to contact the transit authorities, only the journalist's actions are described in such official terms. This reveals that, in the context of news reporting, the level of agency extended those to contribute content on social media depends heavily on *who* is behind the content. Indeed, the MDA appears to suggest that journalistic actions on social networking sites are treated with a greater deal of agency than those from 'ordinary' citizens.

6.2. Presentation of journalists as having taken control

One of the points of differentiation between the staged 'media event' and the disaster marathon, as outlined by Liebes (1998) is that, in the media event, the state uses mass media as a channel to communicate with the audience, whereas in the disaster marathon, the mass media are given the latitude to direct the narrative and direct blame for the chaos. As previously stated, this is because governments and other power-holders have traditionally been unprepared to handle the immediacy of live coverage (Liebes, 1998, p. 75), opting instead to communicate to the public via orchestrated press conferences and press releases. According to Liebes (1998), who focused her attention the news narrative of terror and war, this has traditionally led to an anti-establishment narrative. In this research, there was little evidence of an anti-establishment narrative, and some evidence that governments held

control over their role in the narrative through content from social networking sites. Stakeholders from the public domain were cited in nearly half (41.1%) of the articles that used social networking sites as a source; and politicians were cited in just under a quarter (21.6%) of articles that used social networking sites as a source. Although an anti-establishment narrative occasionally emerged, as it did in the news text analyzed for the MDA, this was not the norm, and, as stated in the content analysis (section 5.1), it appeared to re-emerge when social networking sites were either used improperly, or not used at all. Furthermore, it was observed that articles that used social networking site content from public sector stakeholders used it to provide updates or additional information to the public. This included the Prime Minister of Canada, who was recognized for "tweeting his sympathies" (National Post, 9 July 2013), and Toronto Hydro, whose Twitter updates were shared to the public indirectly through the news: "@HydroOne is working hard to repair Manby station to restore the 16,000 customers w/o power. ETR unknown. We're waiting too. #darkto" (National Post, 10 July 2013). This seems to suggest that social networking sites, when used effectively, allow government and public sector organizations an opportunity to gain some control over the narrative of the disaster event.

6.3. Opportunistic presentation of witnesses

Finally, the content analysis revealed the extensive incorporation of witness testimony via content from social networking sites. Nearly half the articles (49%) that used content from social networking sites did so as a way to include witness testimony. Liebes (1998) describes the use of witness testimony in disaster coverage as a sort of "chaotic exploitation" (p. 76), as it exposes the pain of witnesses without regard for their dignity or well-being in an effort to heighten tension and dramatize the narrative.

Miraculously, no deaths or serious injuries were reported during this disaster marathon, but this did not prevent the most extreme and sensational images from setting the tone for the coverage. As Liebes (1998) contends, disaster coverage "calls upon those who scream the most, either in agony or in rage—the louder, the less controlled, the better" (p. 80). Such choices were highlighted in the MDA, which noted the exploitive use of an image from Twitter to dramatize the narrative, while offering no explanation or resolution for the social networking site user who posted the image firsthand. This exploitive use of content from social networking sites was reaffirmed in the textual elements of the frame analysis, particularly the journalists' use of nominalization, which severed the link between content creators and their calls for assistance. Again, the news text offers no indication as to the resolution for the users whose tweets were cited in the article, which further highlights the exploitive nature of their use. These choices reveal how social networking sites can be used to reinforce the disaster narrative theme.

7. Conclusion

In answering the central research question—'how do journalists use social networking site content to assert narrative control over disaster events', this research determined that journalists, for the most part, assert narrative control by relying on established narrative typifications associated with the disaster marathon as outlined by Liebes (1998). This research evaluated the presence of three narrative elements (the presentation of journalists as ordinary citizens who became heroes; the sense that journalists have taken control over the event; the opportunistic presentation of witnesses) in news coverage of the July 8, 2013 flooding in Toronto Canada. The findings from the content analysis and MDA reveal that journalists use social networking sites to frame themselves as heroes by revealing

themselves, their commitment to their work and the work of their colleagues, to the audience through the use of Storify and direct projection of their own social networking site content into the news narrative.

The analysis also revealed that while journalists may rely heavily on content from social networking sites to incorporate witness testimony into their narrative, they continue to exercise a great deal of discretion in how that witness testimony appears, and what is revealed about that witness. In the article being studied, the author selected an eyewitness image from Twitter but offered little context as to who authored the image (beyond the author's name), what the witness said when they tweeted the image and when and how the witness got off the train. This is consistent with findings by Lorenzo-Dus and Bryan (2011), who found that journalists who used filmed witness footage of the 2005 London bombings wielded control over the footage by removing the sound to heighten the intensity and drama of the clip.

However, the findings also reveal that social networking sites have forced journalists to give up certain elements of narrative control. In the past, journalists were the first to reach the public and enjoyed a great deal of exclusivity with respect to coverage of disasters, while technological capabilities made the government and their affiliated agencies (e.g. transit and hydro organizations) appear slow-to-react. The content analysis revealed that social networking site content from public agencies and politicians together represented one of the most often-cited sources of news in the sample. While the MDA did detect criticism of certain public agencies, for the most part this was directed precisely at agencies that did not effectively use social media to communicate with the public. Overall, the use of social networking site content from public sector organizations and stakeholders appeared to allow them to gain some control over how they (and their activities) were portrayed the narrative--

effectively limiting what has in the past been journalists exclusive control over the story (Liebes, 1998). Future research, perhaps with a larger or more diverse sample, could evaluate what aspects of a public organization's social media presence during disaster have an overall positive or negative impact on their image in news coverage. For example, future research might consider whether it is more beneficial to provide access to relevant information (e.g. how to deal with a flooded basement) as opposed to specific, disaster-related updates (e.g. power restoration, transit re-routing).

On a related note, this research focused exclusively on news as a source of information on updates and recovery during disaster, however it is not clear whether this is still the preferred, or even most popular outlet that people turn to during disaster marathons. Future research might also interview victims and individuals affected by disasters to establish how they receive updates about the disasters, and whether reporting from traditional news outlets serves to complement or reinforce the curation they already perform as individuals. Given the extensive social media presence of journalists and their affiliated news organizations on social media, it is plausible that people reading the news articles analyzed in this text received them via social networking sites, which may affect how the articles were consumed, the context in which they were read, and the information that was sought by reading them. As such, future research might consider incorporating more ethnographic methods such as surveys or interviews of journalist and/or readers to better understand news production and curation (Machin & Mayr, 2012, p. 217).

Finally, it is worth highlighting a frame that emerged from the generic frame analysis in the MDA. Based on the disaster marathon narrative, certain participatory groups were expected to emerge from the generic frame analysis, namely: journalists, witnesses, governments and their affiliated stakeholders (i.e. transit agencies, hydro companies, etc.).

However, a fourth group was implicated in the news texts, though little mention was made of them. That is, the apparent emergence of an 'audience' on social networking sites, who were portrayed as having shared and reacted to information on social networking sites as though it were a stage that could be gazed upon. However, it is not clear who this audience is comprised of, or if they even exist at all. After all, social networking sites are not stages, but rather, dynamic, horizontal communications systems of exchange, which are facilitated by individuals who share similar social groups, interests, locations and interests (boyd & Ellison, 2008; Li & Rao, 2010). Further research, perhaps in the form of interviews or discourse analysis might consider how journalists conceptualize or 'imagine' audiences of social networking sites, and how they view themselves in relation to such audiences (what is it that differentiates journalists from said audiences), and what purpose do they serve (i.e. is the 'imagined audience' of social networking sites an alternative to vox pop? Do they serve to reinforce the legitimacy of journalists narrative authority?)

Findings from this project reinforce the need for more diverse research approaches in the area of participatory journalism and use of content from social networking sites. Further, it strengthens Lorenzo-Dus and Bryan's (2011) contention that research must move beyond thinking about the 'singular effect' of social networking sites on journalism, to thinking about how it might affect journalism in different news contexts and in different social conditions. Doing so helps to access more concrete conclusions and recommendations, and can help shift debates about the role of participatory journalism and social networking sites from the realm of obscurity to one that is focused, with clear implications.

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Appendix A: Coding Structure

Note: The following is the original coding structure quoted in Broersma and Graham (2013), p. 450-451.

SQ1: In what manner was the social networking site content sourced?

a) Direct quote
b) Paraphrase

SQ2: What was the function of the social networking site content?

a) illustration: tweets that were used to illustrate large trends or generalizations
b) trigger: tweets that triggered a news story because tweets themselves were newsworthy
c) standalone: tweets simply published on their own with no context
d) Q&A: tweets used as part of a question and answer exchange with journalist

SQ3: Who was being sourced?

a) Politician
b) Lobbyist
c) Professional (e.g. corporate executive, director)
d) Expert
e) Journalist/media
f) Comedian
g) Actor (television/film personality)
h) Athelete
i) Musician/singer
j) Model
k) Cultural producer
k) Vox populi
l) Person involved/witness
m) Public agency/ stakeholder
n) Other

The following is the coding structure as amended and used in this research

SQ1: In what manner was the social networking site content sourced?

a) Direct quote
b) Paraphrase
c) Image of content
d) Storify

SQ2: What was the function of the social networking site content?

a) illustration: tweets that were used to illustrate large trends or generalizations
b) trigger: tweets that triggered a news story because tweets themselves were newsworthy
c) standalone: tweets simply published on their own with no context
d) Q&A: tweets used as part of a question and answer exchange with journalist
e) Provide update/ new information

SQ3: Whose social networking site content was being sourced?

a) Politician
b) Lobbyist
c) Professional (e.g. corporate executive, director)
d) Expert
e) Journalist/media
f) Comedian
g) Actor (television/film personality)
h) Athelete
i) Musician/singer
j) Model
k) Vox populi
l) Person involved/witness
m) Business/corporation
n) Public agency/ stakeholder
o) Other

Appendix B: Global News article analysed in the MDA

Tech
July 9, 2013 1:14 pm

GO Transit, Emergency Management criticized for communication during Toronto flood

By Nicole Bogart
Global News

A GO Train near Bayview Avenue and Pottery Road was stuck Monday after severe flooding along the Don Valley Parkway in Toronto. July 08, 2013

Christiano Yoonga / Twitter

UPDATE (Jul. 9, 2013 – 5:02 p.m.) : A spokesperson from Toronto's Office of Emergency Management told Global News that the city made an executive decision to tweet from the official City of Toronto Twitter (@TorontoComms) so that it would reach more social media users.

"We made a call that because the [City of Toronto Twitter account] @TorontoComms had a higher follower count, so we encouraged people to follow the communications account," a spokesperson told Global News.

–

TORONTO – During the height of Monday's record-setting storm, Toronto residents took to social media to scour the web for updates and information about everything from power outages to transit troubles.

But in the midst of the chaos, there were a few noticeable absences on social media.

Shortly after 5:30 p.m.ET, a GO train, on its way to Richmond Hill from Union Station, got stuck in high waters near the Bayview extension. As flood waters began filling the bottom level of the double-decker train, commuters began tweeting images of the flooded train and asking for information regarding their rescue.

Meanwhile, GO Transit's official Twitter page – a normally active account that had been responding to regular customer inquires up until 5:07 p.m. – was silent.

The account did not tweet any information regarding the flooded GO Train, or weather delays on other routes, until 8:19 p.m.

Emergency crews began rescuing stranded passengers on the flooded GO Train around 9:30 p.m.

Go Transit's Twitter account description contains the line "Not monitored 24/7."

Global News contacted media relations at GO Transit on Monday evening and none of the three information phone numbers at GO Transit were answered.

Global News was able to contact a representative from GO Transit on a cellphone at 7:18 p.m. who said he would get back in touch with Global News with more information. He called Global News back at 8:18, as GO Transit also started tweeting updates. Global News was told that GO Transit was trying to open windows on the train and that it would try to move the train to a platform.

Global News contacted GO Transit again on Tuesday to obtain a statement regarding the lack of communication about the stranded train on social media and what protocols GO Transit has in place for social media response in emergency situations.

GO Transit did not respond to requests for comment at time of publishing.

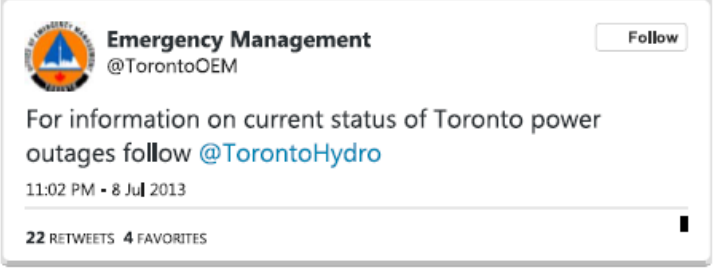
The lack of tweets caused GO Transit passengers and those following the storm on social media to criticize the organization.

Tweets to the GO Transit Twitter account ranged from sarcastic – one user tweeting, "Hey @GOTransit, I'm stuck on your 5:30 Richmond Hill train and oh yeah, it's flooding," – to angry – another user tweeting, "@GOtransit needs a new social media person yesterday. No communication during times like these just makes it worse."

After 8:19 p.m., the account actively tweeted updates until 11:15 p.m. and began tweeting Tuesday morning just before 6 a.m. for the morning rush.

Similarly, Toronto's Office of Emergency Management came under fire for only tweeting once during the storm.

The account (@TorontoOEM) tweeted, "For information on current status of Toronto power outages follow @TorontoHydro," just after 11:00 p.m. Monday – hours since initial reports of power outages and flooding began.



Though the Twitter account notes that it is not monitored for incoming messages – explaining the lack of direct communication with other users – users were clearly frustrated with the lack of communication from the office.

"Whoa! Way to tweet up a storm (#stormTO) there, @TorontoOEM," said one user Vicki Ziegler (@vziegler).

Other responses to the tweet included, "@TorontoOEM #facepalm #useless" and "pathetic."

The Office of Emergency Management's mandate reads, "Helping Toronto and its residents prepare for and deal with major emergencies and disasters is the primary purpose of the Office of Emergency Management (OEM), the City of Toronto's coordinating agency for emergency and disaster activities."

After Hurricane Sandy related storms caused damages in Toronto in October, Toronto City Councilor Kristyn Wong-Tam submitted a recommendation that the Director of the Office of Emergency Management review the protocol and communication strategy during emergencies.

Global News contacted the Office of Emergency management to obtain a statement, but did not receive a response by time of publishing.

On Tuesday, Transportation Minister Glen Murray posted this video on YouTube:

Correction: An earlier version of this story said that Global News contacted media relations at GO Transit on Monday at 7:30 p.m.ET and learned that their public relations representatives had gone home for the evening.

It has been changed to indicate that none of the three information phone numbers at GO Transit were answered, and that Global News was able to contact a representative from GO Transit on a cellphone at 7:18 p.m. who said he would get back in touch with Global News with more information. He called Global News back at 8:18, as GO Transit also started tweeting updates. Global News was told that GO Transit was trying to open windows on the train and that it would try to move the train to a platform.

⚠ Report an error

More Stories

Consumer

Why Toronto keeps flooding and which basements are most at risk

- **The power of social media: How citizen reporting may impede active police investigations**
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- **Uber continues to face resistance in Canada**
- **Toronto Morning: What you need to know today**

Weekly Flyers

Rexall

Appendix C: List of articles used in content analysis

Date	Outlet	Article Name	Author
07/08/13	Global	People stuck on flooded GO train after heavy rain	James Armstrong
07/08/13	Global	Heavy rain pounds Toronto, temporarily halts subway service	Nicole Mortillaro and James Armstrong
07/09/13	Global	The most dramatic photos and video from the Toronto flood	Adam Frisk
07/09/13	Global	DVP fully reopens, GO Train and TTC delays remain	David Shum
07/09/13	Global	One Direction concert goes ahead after flooding	John R. Kennedy
07/09/13	Global	GO Transit, Emergency Management criticized for communication during Toronto flood	Nicole Bogart
07/09/13	Global	How Toronto Mayor Ford handled the crisis: social media reacts	Erika Tucker
07/09/13	Global	Flooding forces Phish to postpone concert	John R. Kennedy
07/08/13	National Post	We're hanging on by a thread': Ford warns residents over power as Toronto assesses damage	National Post Staff
07/09/13	National Post	Toronto resorts to rolling blacouts after record storm leaves electrical grid hanging by a thread	National Post Staff
07/09/13	National Post	Toronto floods photos show submerged streets, nearly floating GO Train, as 'surprise' deluge hits city	National Post Staff & CP
07/09/13	National Post	Part of city still in dark as citizens mop up after record-breaking flood	Alexandra Bosanac, Diana Mehta & CP
07/10/13	National Post	Toronto due for more rain as region dries out from Monday's deluge, thousands still without power	Jessica Vitullo & CP
07/10/13	National Post	Possibility of nickel-sized hail, as Southern Ontario, once again, under severe thunderstorm watch	Jessica Vitullo, NP Staff & CP
07/10/13	National Post	Leading lawyer in airport rush revealed as the owner of Toronto's infamous $200K flooded Ferrari	Josh Visser
07/11/13	National Post	Passengers stranded for hours on flooded GO Train to get $100 credit.. For more GO travel	Allison Cross

07/08/13	Toronto Star	Severe thunderstorms cause flooding, blackouts, havoc on roads around GTA	Andrew Nguyen
07/10/13	Toronto Star	Toronto lawyer abandons flooded Ferrari to rush to case	Marco Chown Oved
07/13/13	Toronto Star	How to get ahead of the storm with green infrastructure	David Suzuki
07/19/13	Toronto Star	Should taxpayers keep funding erosion repairs?	Rachel Mendleson
07/08/13	Globe and Mail	Record rains cause heavy flooding in Toronto	Vidya Kauri and Kaleigh Rogers
07/09/13	Globe and Mail	Toronto struggles to recover from record rains	Vidya Kauri, Kaleigh Rogers and Ann Hui
07/09/13	Globe and Mail	Doug Ford does extra duty as traffic cop during Toronto blackout	Elizabeth Church
07/09/13	Globe and Mail	In wake of Toronto glood, officials warn of rolling blackouts for downtown	Ann Hui
07/13/13	Globe and Mail	Why does this seem like the beginning of the end? (2 parts)	Jared Bland
07/19/13	Globe and Mail	Thunderstorm and tornado warnings grip Ontario as storm tracks eastward	Canadian Press
07/08/13	Toronto Sun	Wild rainstorm in Toronto causes flooding	Don Peat, Angela Hennessy and Terry Davidson
07/09/13	Toronto Sun	Child swept up in Mississauga flood water	Not applicable
07/08/13	CTV News	Toronto battered by storm, flooding: thousands stranded	None given
07/08/13	CTV News	Toronto flood photos show parts of city underwater	Daniel Reid
07/09/13	CTV News	Toronto flood: how to prepare for the next disaster	CTV Toronto
07/08/13	CBC News	Rain pounds Toronto, strands commuters on train	CBC News
07/08/13	CBC News	Toronto storm, flood updates [storify]	CBC News
07/09/13	CBC News	Toronto floods leave power system 'hanging by a thread'	CBC News
07/09/13	CBC News	Toronto flood strands airline passengers in Ottawa [vine video]	CBC News
07/10/13	CBC News	Toronto Hydro restores power to almost all customers	CBC News
07/08/13	Huffington Post	Toronto Flooding 2013: Naheed Nenshi summoned by Twitter users	Seema Dhawan
07/08/13	Huffnigton Post	Toronto Storm 2013 Knocks out power, stop subways in Canadas largest city	Associated Press

07/08/13	Huffington Post	Cars abandoned, commuter train stranded as record rains pound Toronto area	Canadian Press
07/08/13	Huffington Post	Toronto power down as torrential rain hits region	Huffington Post Canada
07/09/13	Huffington Post	Twitter calls out to Toronto Hydro via #Darkto	Huffington Post Canada
07/09/13	Huffington Post	Power Outage Toronto: Conserve electricty, Rob Ford urges City as flood repairs begin	Huffington Post Canada
07/09/13	Huffington Post	Snake on a train: Flooded GO Train gets surprise passenger	Huffington Post Canada
07/09/13	Huffington Post	Toronto Fooding photos emerge as torrential rain hits city	Huffington Post Canada
07/09/13	Huffinton Post	Rob Ford's Toronto flood response criticized on Twitter	Huffington Post Canada
07/09/13	Huffington Post	Musicians react to Toronto Floods (TWITTER)	Huffington Post Canada
07/09/13	Huffington Post	Toronto fire probes flood-related building collapse (via CBC)	CBC
07/09/13	Huffington Post	Ferrari abandoned in tunnel	Huffington Post Canada
07/10/13	Huffington Post	Toronto floods 2013: Power outages, GO Train chaos plague region after record rainfall	Huffington Post Canada
07/10/13	Huffington Post	Flooded GO Train passengers make an escape (video)	Huffington Post Canada
07/10/13	Huffington Post	Toronto Flood damaged vehicles include ferrari, corgette and more in 2013 disaster	Huffington Post Canada
07/10/13	Huffington Post	Toronto Hydro Power outage: Power restored for thousands but many still waiting	Huffington Post Canada

Appendix D: Data tables for Fig 1-4

Data for Fig. 1: Whose content was sourced?	
Politician	11
Lobbyist	0
Professional (e.g. corporate executive, director)	2
Expert	0
Journalist/media	15
Comedian	0
Actor/actress (including television or film personality)	3
Athlete	0
Musician/singer	2
Model	0
Vox populi	15
Person involved/witness	25
Business/corporation	8
Public agency/stakeholder	21
Other	3

Data for Fig. 2: What was the function of the content?	
Illustration of larger trends	21
Triggered a larger story	8
Standalone	5
Question-and-answer exchange	0
Provide update/information	30

Data for Fig. 3: Functions of social networking site content over time				
	Illustration	Trigger	Standalone	Updates
July 8, 2013	7	0	3	11
July 9, 2013	10	6	1	15
July 10, 2013	2	2	1	6
July 11, 2013	0	0	0	1
July 12, 2013	0	0	0	0
July 13, 2013	1	0	0	0
July 14, 2013	0	0	0	0
July 15, 2013	0	0	0	0
July 16, 2013	0	0	0	0
July 17, 2013	0	0	0	0
July 18, 2013	0	0	0	0
July 19, 2013	1	0	0	0
July 20, 2013	0	0	0	0
July 21, 2013	0	0	0	0
July 22, 2013	0	0	0	0
July 23, 2013	0	0	0	0
July 24, 2013	0	0	0	0
July 25, 2013	0	0	0	0

Data for Fig. 4: In what manner was content from social networking sites sourced?	
Direct quote	20
Paraphrase	26
Image of content	17
Storify	12