SOCIAL *MEDIA*, CRISIS COMMUNICATION AND COMMUNITY-LED RESPONSE AND RECOVERY: AN AUSTRALIAN CASE STUDY

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TABLE OF CONTENTS

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ABSTRACT

This paper discusses research being undertaken to explore and document an Australian case study of a Facebook page, *"Tassie Fires – We Can Help"* (TFWCH), which was created by a community member during a bushfire emergency in 2013. This project represents one of the first and most extensive insights into how a community-led social media page functions in a crisis situation. The page was used as a platform to inform the public and share information, provide a medium for users to ask for help or offer help, and to manage volunteers. This paper discusses the background to the case study.

Additional keywords: emergent group, spontaneous volunteer, psychological first aid, social media, crisis communication, community resilience

INTRODUCTION

Communication plays a pivotal role in effective disaster response. However, due to the heterogeneity of communities, it can be difficult for formal responders to provide a means of getting information from and to affected communities in ways that accommodate their diverse issues, needs and goals. Furthermore, these change over time as people negotiate increasingly varied response and recovery needs. What is needed is a means of communication that engages communities and their members in ways that accommodate this diversity and that complements the official coordination of disaster response and recovery efforts. Social media may represent part of the solution to this problem.

Social media content offers community members and agencies alike access to real-time, first-hand information during the preparation, response and recovery phases of disasters that can be tailored to meet the needs of different groups, and it represents a useful tool for communication and situational-awareness (Cobb et al., 2014; Liu, Palen, Sutton, Hughes, & Vieweg, 2008; Yin, Lampert, Cameron, Robinson, & Power, 2012). An important area of contribution relates to organising the complex management issues created by the surge in volunteers who wish to help in the aftermath of a disaster (Kendra & Wachtendorf, 2001; Paton, Johnston, Mamula-Seadon, & Kenney, 2014) and being able to link the capabilities of this volunteer resource more accurately to community needs.

If, however, social media is to be used effectively for this and other emergency management activities, systematic research into how social media can facilitate cost effective approaches to engaging communities is needed (Sutton, Palen, & Shklovski, 2008). Of particular interest is how these elements combine to potentially enhance community resilience, such as through being operationalised in a theoretically validated model of community resilience (Norris, Stevens, Pfefferbaum, Wyche & Pfefferbaum, 2008). Norris et al. identified four networked resources (objects, conditions, characteristics and energies that are of value) critical for resilience: *economic development, information and communication, social capital* and *community competence*. The model has not been applied in the social media context to date, and thus exploring other potentially important components, such as the leadership of emergent groups, is considered important. Case studies in this area are a critical way of pursuing this goal, and this paper introduces an Australian case study of a social media initiative that was created during a bushfire emergency in 2013.

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THE TASMANIAN BUSHFIRES OF 2013: A SHORT HISTORY

The ensuing information is sourced from the 2013 Tasmanian Bushfires Inquiry report (DPAC, 2013)[1]. In total, there were 103 recommendations put forward by the Inquiry, all of which were accepted or approved-in-principle by the State Government in office at the time.

The bushfires of January 2013 were Tasmania's worst in more than 40 years. As is detailed more specifically in the Bushfire Inquiry, thousands of people were displaced, well over 900 homes, outbuildings, properties and vehicles were damaged or destroyed, and hundreds of square kilometres of bush and farmland were burnt.

Three major fires started in Tasmania in January 2013. A campfire was the 'most likely' cause of one of the three major fires, the Derwent Valley fire, which burned from 4th January to the 22nd January, with a boundary perimeter of 124.1 kilometres. The Bicheno fire, which began on the 3rd January, was ruled to have started from lightning strikes. This fire was contained by the 9th January and declared closed by the Tasmania Fire Service on the 22nd January. Tasmania Police evacuated approximately 1,000 campers and tourists from the area. The Forcett fire, which began on the 3rd January at approximately 2pm, was ruled 'accidental', and likely began from a campfire that had been lit in an old tree stump almost a week earlier; a fire which had not quite been extinguished. This fire was considered closed on the 20th March. The fire had burned 25,520 hectares with a perimeter of 309.9 kilometres. This fire was the most destructive of the three major incidents occurring.

Although there were a number of positives in the management of the disaster, several problems arose in regards to the handling of the emergency response, and the subsequent recovery. There was confusion about which individual or groups were in charge of the entire emergency operation (p. 65). The police-appointed road closures were considered by many to be unnecessary, and an inflexible approach to closing the roads was taken that was considered to have hindered the response significantly (p. 111). There was also confusion with when and who to evacuate (p. 114); and overall confusion on the fire grounds with emergency crews being overwhelmed and undermanned (p. 91). Handling information and knowledge in an effective way is paramount for emergency services in a disaster, which is difficult in the turbulent, fast-paced, confusing world that is an emergency (Yates & Paquette, 2011). The findings of the Inquiry suggest that there were critical failures in the flow of information and communication during the disaster.

The Tasmanian Farmers and Grazier's Association stated that there was "no response by Government until the 7th January" (p. 135). The Bushfire Recovery Task Force was established on the 11th January. As is often the case, the transition from response to recovery was difficult for many reasons, including issues around accessibility, as the fires were burning for quite some time. Furthermore, many of the affected areas remained isolated and dislocated due to the roadblocks that remained in place. There were issues with the evacuation sites, which were well over capacity, such as insufficient staffing, poor leadership, conflicting information, and lack of back-up power generation. There were also issues with spontaneous volunteers and dealing with unnecessary goods being donated by boat (p. 138), to name a few concerns highlighted in the Inquiry.

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[1] All page number references in this section refer to the 2013 Tasmanian Bushfires Inquiry report

These findings highlight the challenge of communicating with large and diverse groups of people in emergency events whose impacts are geographically distributed and characterized by evolving demands and challenges. Social media offers opportunities to communicate effectively during disasters under these circumstances because it facilitates obtaining real-time information about what is happening from those in situ (Yin et al., 2012). Social media offers many opportunities for emergency management and community groups to engage with and listen to public input and debate and so facilitate comprehensive monitoring and situational awareness during disaster response. In the recovery period, social media can facilitate extending emergency response and management through, for example, crowd-sourcing and collaborative development, and creating social cohesion. While still in its infancy, it is clear that social media represents an area for systematically allowing communities to advance their causes, engage in risk management in ways that more accurately reflect community needs, and enhance research (Alexander, 2013). If it is to realise these benefits, systematic research is essential. This paper outlines some preliminary work in this area that draws on a mix of "participant observation" in the online environment and the analysis of social media use during an event. The fact that this work draws on data obtained during disaster response adds to its validity as a guide to the effective use of this resource.

These findings also provide context and rationale for the founding of a Facebook page, which was created due to seeing gaps in the response and recovery. The page was created by a community member who is the first author of this paper, as after the fires, she analysed the case study as part of a Psychology Doctorate at the University of Tasmania.

THE TASSIE FIRES – WE CAN HELP FACEBOOK PAGE: AN ANECDOTAL, AUTO-ETHNOGRAPHIC INTRODUCTION

On the afternoon after the fires had first begun, January 4th, I was at home working while also baby-sitting for a friend. Being 60km away, my property was not under any threat from these particular blazes. I was listening to updates on ABC Local Radio. The ABC (Australian Broadcasting Commission) is a federally and state government funded radio operation around Australia, and since 2010, it is recognised as the predominant emergency broadcaster in the event of any type of crisis. I knew the disaster was serious when the radio coverage was rolling non-stop. I was also monitoring the Tasmania Fire Service (TFS) website. Already, stories were circulating about homes being destroyed, people being evacuated, and other individuals and families being trapped behind the fire front: it was clear a crisis was unfolding.

I had no experience with helping during an emergency. I was anxious to help but was limited by my lack of experience and my immediate situation – stuck at home baby-sitting. I posted a few questions on Facebook through my personal account to my own network of friends and family, and details started to emerge: for example, there was a refuge centre that needed volunteers, people were worried about their pets, people couldn't get a hold of friends and family who were in the area, and others were offering donations. I had a strong sense that all this information, goodwill, as well as offers and requests for help, needed to be organised. These were only general thoughts, but they were enough to get me started on creating the "Tassie Fires – We Can Help" (TFWCH) Facebook page.

I am not a social media expert and I still cannot pinpoint why I actually acted on my desire to help. I know I was emotionally connected to what was happening, as friends of mine either lived in the area or had family in the hardest-hit area of the state. This emergency wasn't something happening in some

far-off place on a map: it was right around the corner. From my house, I could easily see the thick smoke and the orange glow of the fires.
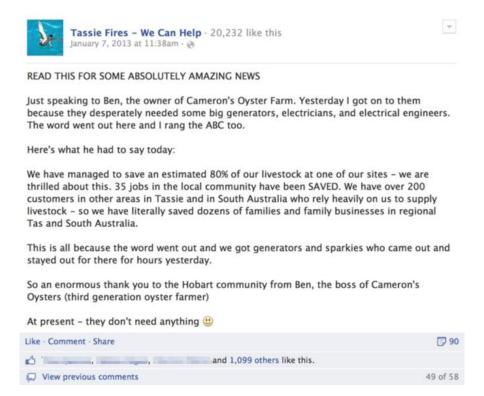
The fire in the southeast, known as the Forcett fire, was on two peninsulas, which are connected to the rest of the island of Tasmania via the same highway. When the road was cut off due to the fire-front and police blockades, thousands of people were left stranded. Homes lost power and telecommunication services were completely non-operational. A few thousand tourists holidaying in the area were also trapped. There was a tremendous hunger for information – from those trapped on the south east coast, and from those trying to reach them. There were vague reports that the Bicheno fire had also burnt houses; and that the Derwent Valley fire to the northwest was threatening a number of communities in the area.

I set up the Facebook page with the general idea that it could be something of a clearing-house. People could post with requests or problems, and solutions would be found (I hoped). Although I thought it was a long shot, I called my local ABC radio station, and asked if they would put me on air. To my surprise the producer connected me with the news presenter immediately, and we had a live discussion about the page and what I was hoping to achieve. It was an early insight into how social media and traditional media might work together in an emergency situation. Even though the emergency was relatively small, and the state of Tasmania is small, within a few days the page had attracted almost 21,000 followers. People flocked to the page to get information, to ask questions, to give support and to see what was needed. There were updates from police and emergency services provided through the page, information from various charities about what they were doing and how people could contribute, while thousands of volunteers shared information. I was on the laptop and telephone for up to 20 hours a day, posting new content every three to four minutes. This continued for almost a full fortnight. Activity slowed but continued for months, and the page continues to the present day. A locally sponsored website has also been set up to work in tandem with the page in future disasters (www.tassiefireswecanhelp.com).

One of the stories which helps illustrate the page's role and impact concerns the plight of an oyster hatchery in Dunalley, Cameron's. The hatchery housed around 60 million baby spat. About 40-45% of the oysters grown in Australia are from spat grown at Cameron's. The hatchery also employs 35 people locally. The hatchery only narrowly escaped the flames but on the day immediately following the worst of the fire-front, another crisis emerged. Power had been lost, and therefore the cooling and feeding systems in the hatchery were non-operational. Baby oysters are very sensitive to temperature; even slight changes will cause stress and will kill the oyster spat in a short space of time.

A distraught local oyster farmer contacted me. He had already seen people using TFWCH and he figured it was his last chance to get some help. On 6th January at 1:23pm I posted a message on his behalf. In the post, I explained what was at stake, how we needed to help, and how it could all be done. I was requesting three generators, and some electricians and electrical engineers to get to the area and assist. The message also included the contact details for the hatchery and the emergency services personnel that would be needed as escorts to ensure people were able to access the area safely, if they were going over land rather than by sea. The appeal was a success. Having had ongoing contact with the hatchery, at 3:53pm on the same day I posted again, to say all that was still needed were some big generators, and again at 6:43pm saying one big generator had been sourced, but another was needed. By 9:02pm that night, generators had been delivered, two service stations were back up and running, and two more generators were on the way.

The following morning, having successfully sourced the generators, and more than enough electrical engineers and electricians for the job at hand, I was able to post the following message from the owner of the hatchery:

This one example demonstrates how the page helped connect volunteers with those in need, and provide immediate assistance. The owners of the hatchery are certain that help would not have arrived in time if they had attempted to go through the official channels – indeed, they had tried, and these channels had proved to be ineffective. Ben Cameron, the owner of the hatchery, summed up his experiences in an interview for an ABC Australian Story on my role in the fires (ABC, 2013):

> Hour by hour our fish were dying… So we stood to lose all of our all of our livestock, around about $2.5 million worth of stock, around 100 million individual animals. Our oysters could survive 36 to 48 hours out of water. That's not long enough for a bureaucratic institution to make decisions. So realistically it had to be a private, private venture and that's where Mel came in. It was fantastic. And her being able to deal with all the logistics and coordination from her place meant that I can actually get on with saving our livestock. We asked for something, it just arrived… The Government in this was absent. And that's - I don't necessarily think that is a reflection on their unwillingness to be involved. It was their due process, they have to do this, they've got liability issues, when realistically in an emergency situation like we had, we've just got to act. You can't worry about all that sort of stuff or else the economic losses is going to be tremendous.

Throughout this crisis, there were hundreds if not thousands of volunteers connecting and contributing. Media coverage of the page was national and international. Some people used the page, while others probably didn't know it existed. But the ones that *did* use it found they could rely on it when they needed to.

My role as Administrator of the page involved channelling, moderating and filtering the information coming in to me via the page, my phone, my emails, or through other media such as local radio,

television and newspaper sources. People were able to contact me directly either through the page or on the telephone. I could post information on their behalf and they could also comment directly on existing posts. I networked and liaised with local media outlets, emergency authorities, charities, agencies, local sources in the affected areas, community groups and individual volunteers as much as possible to ensure to the best of my ability that the information I was sharing was accurate.

CURRENT RESEARCH

A review of the literature has revealed that scientific, empirical research into the use of social media for driving communication, volunteering and psychological first aid in disasters is limited. Almost all the research to date has explored the use of Twitter in a disaster, rather than Facebook, despite the global uptake of Facebook being substantially higher, and despite Twitter not being used extensively during disasters as yet (De Longueville, Smith, & Luraschi, 2009; Pew Research Centre, 2013; Smith, Bill Halstead, Esposito, & Schlegelmilch, 2013; Starbird & Palen, 2011; Starbird, Palen, Hughes, & Vieweg, 2010; Sutton et al., 2008). There are some impressive crowdsourcing platforms available, such as Ushahidi (www.ushahidi.com) and Humanity Road (www.humanityroad.org), which has been the subject of a limited amount of research (Starbird & Palen, 2011). One useful case study has been conducted (Taylor, Wells, Howell, & Raphael, 2012), which explored the ability for a community Facebook page to deliver psychological first aid and enhance community resilience. However empirical research on community-driven, structured, emergent volunteering is lacking, as these groups are rare, and are difficult to access for research purposes. Research on co-ordinated emergent volunteers operating in an online environment is practically non-existent.

A social media supported, community-led response and recovery initiative such as TFWCH is yet to be documented comprehensively in the literature. It is important that research is conducted in this area, because the community can improvise and be flexible in disaster situations, and can and do lead vital rescue and relief efforts during emergencies (Kendra & Wachtendorf, 2001; Palen & Liu, 2007; Tierney, 2002). Thus the role of TFWCH in the immediate aftermath of the bushfires is now the subject of a University of Tasmania doctoral thesis, first and foremost to document the case study. The research questions focus heavily on the theoretical models put forward by Norris et al. (2008) and are as follows:

1) Does social media influence the ways volunteers can operate, improving their functionality, which in turn can have a positive impact on community resilience?

2) What evidence is there that through using social media, an emergent group can contribute to community resilience, specifically as operationalised by Norris et al.'s (2008) models of community resilience?

3) Does looking at Norris et al.'s model of community resilience (2008) through the prism of social media reveal a need to complement the social support elements with psychological first aid? Is there evidence for the suggestion that psychological first aid can be delivered in an emergency context by an emergent online group?

4) What are the characteristics of online emergent group leadership and management? How does social media influence the development and manifestation of community leadership and how does leadership, in the social media context, influence the resources in Norris et al.'s model (2008) of community resilience?

2,443 Facebook posts have been analysed thematically, to explore the roles and functions of the page. Three different qualitative and quantitative questionnaires administered one-month post-fires have been analysed (n = 678). 1,302 comments within these questionnaires relating to the utility of the page and social media have been thematically analysed. A year's worth of Facebook metrics was also analysed to explore the demographic information about the users of the page, and the reach of the page to its audience. The case study is currently being prepared, and will be submitted as part of a Psychology PhD in 2015.

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