Title:

Developing public disaster communication for volunteer recruitment:

understanding volunteer motivations

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Background: the 2011 Brisbane floods

In January 2011 the Brisbane River burst its banks and inundated the central business district, and at least 28,000 homes (Sweet, 2011) and 2500 businesses (Elk, 2011) in Brisbane, Australia's third largest city. The Brisbane floods became Australia's most expensive natural disaster (van den Honert and McAneney, 2011 in Bohensky and Leitch, 2013), causing billions of dollars in damage (Queensland Government, 2011). As the floods started receding, many thousands of well-meaning volunteers converged on the worse-hit areas, resulting in confusion and misdirection (Sweet, 2011). Both the local (the Brisbane City Council) and Queensland governments coordinated volunteer deployment, directing volunteers to register either online via volunteering organization, Volunteering Queensland, or in person at four volunteer registration centres ("Human spirit shines through", 2011). This resulted in 62,000 registered volunteers (Update, 2011), many of whom were bussed directly from registration centres to affected areas to help with the clean-up. There was likely triple that number in unregistered volunteers (Vogler, 2011). Dubbed the "Mud Army" by the media, these volunteers cleaned affected houses, businesses, footpaths, and roads (Vogler, 2011) awash with sewage-contaminated mud, armed simply with shovels, brooms, mops, buckets, and scrubbing brushes. The efforts of the "Mud Army", called the "biggest volunteer effort in Australia's history" (Brisbane City Council, 2011), saved millions of dollars in clean-up costs (Vogler, 2011) for local and State governments and insurance companies.

Understanding spontaneous volunteers

Spontaneous volunteers who converge on disaster areas play a critical response role, often being first on the scene and typically trusted by victims (Fulmer, Portelli, Foltin, Zimmerman, Chachkes, and Goldfrank, 2007). The term "spontaneous volunteers" refers to individuals who provide assistance immediately following a disaster (Lowe and Forthergill, 2003). The sometimes overwhelming number of spontaneous volunteers, from both within and outside the disaster-affected community, poses significant challenges for disaster relief and recovery services (Barraket, Keast, Newton, Walters, and James, 2013). Characteristically, as spontaneous volunteers are seen to hinder relief efforts, government and emergency management agencies resist harnessing this workforce (Drabek and McEntire, 2003). Yet these untrained volunteers are integral to accomplishing many disaster recovery tasks (Barsky, Trainor, Torres, and Aguirre, 2007). Indeed, most response work is carried out by community members who are present or nearby during a disaster (Lowe and Fothergill, 2003).

Designing communication that stimulates people to volunteer to assist community recovery efforts in large-scale emergencies is therefore crucial (Palttala and Vos (2011). To most effectively assist recovery efforts, this workforce needs to be instructed on how best to assist and be deployed to areas most needing assistance. In order to effectively recruit and manage this workforce, understanding spontaneous volunteers and their motivations is critical to establishing effective disaster communication plans (Lowe and Fothergill, 2003; Palttala and Vos, 2011). Since disasters often generate powerful emotions and different responses (Beyerlein and Sikkink, 2008), understanding emotions' role in motivating behavior is important.

Although emotion is intensely researched in other domains (e.g., organizational psychology, management, marketing), its influence has received little attention in volunteering and disaster research.

In parallel with volunteer convergence onto physical disaster sites, convergence behavior is now evident on-line (Hughes, Palen, Sutton, Liu, and Vieweg, 2008). In the 2011 Brisbane floods, many individuals used social media such as *Facebook* and *Twitter* not only to exchange information, but for coordinating relief efforts (Knaus, 2011). The actual and potential use of social media in disasters has generated intense interest evidenced by a small, but burgeoning body of literature (Alexander, 2013). The use of social media as a method of communication and information exchange has been studied in 2011 Brisbane flood research (e.g., Barraket et al., 2013; Cheong and Cheong, 2011), but investigation of social media used by individuals for volunteer recruitment has only recently attracted research attention (e.g., Macias, Hilyard, and Fremuth, 2009; Jones, 2013). The widespread adoption and use of social media by members of the public during disasters (Alexander, 2013) suggest that social media is increasingly critical to future disaster management and relief efforts. Further, with the increasing use of online social networks in disaster volunteering, it is important to understand how – or whether – social media affects the interpersonal bonds known to influence volunteer recruitment.

Consequently, this research investigates the factors motivating the spontaneous volunteering behavior of the "Mud Army" following the 2011 Brisbane floods. As anecdotal evidence suggests that many volunteers used social media to co-ordinate volunteering efforts via the extended friendship network that is *Facebook*, the

research also examines the role of social media in volunteer recruitment. This chapter concludes with implications for disaster communication.

Theoretical perspectives

Multiple factors influence the actions of volunteers in disaster situations including demographics (e.g., Michel, 2007), kin relationship ties (Silva, Marks, and Cherry, 2009), personal identification with victims (e.g., Beyerlein and Sikkink, 2008), proximity to affected areas (e.g., Lowe and Fothergill, 2003), and ability and knowledge (e.g., Guy and Patton, 1989).

Although it is recognized that personal motivations strongly influence volunteer actions (Betancourt, 1990), little is known about these factors (Guy and Patton, 1989; Beyerlein and Sikkink, 2008). Several theoretical approaches have been suggested to understand prosocial behavior and spontaneous volunteers' motivations, both extrinsic and intrinsic, and are now discussed.

Intrinsic factors

There are several models of prosocial behavior (e.g., see Silva et al.'s 2009 review). The empathy-altruism model views prosocial behavior as dependent on an individual's own emotional experiences of empathy for others (Batson, 1987 in Michel, 2007). Embedded within this prosocial personality orientation are feelings of personal responsibility for others' well-being, particularly those in distress, which becomes the motivating force to assist those in need (Penner and Finkelstein, 1998 in Michel, 2007). Thus, two intrinsic motivators for volunteering are empathy and feelings of responsibility.

However, an alternate model - the negative state relief model (Cialdini, Schaller, Houlihan, Arps, Fultz, and Beaman, 1987) - argues that helping behavior is motivated instead by negative emotions. As disasters often generate powerful emotions and different responses, emotions matter for disaster relief (Beyerlein and Sikkink, 2008) and understanding their function is important. The theoretical background to these three motivators – positive emotions, negative emotions, and feelings of responsibility – are now discussed.

Which emotions matter in disaster volunteering?

Two models – the empathy-altruism hypothesis and the negative state relief model – respectively suggest that either positive or negative emotions motivate helping behavior. These models are now discussed.

Positive emotions. Research using Batson's (1987, in Michel, 2007) empathy-altruism hypothesis contends that prosocial behavior is contingent upon one's emotional experience of empathy for others. Empathy is characterized by concern for another person's situation (Betancourt, 1990). Empathic emotions, which include feeling sympathetic, compassionate, moved, and pity, enhance various forms of prosocial or helping behavior (Betancourt, 1990). Individuals who are able to empathize with others are driven to help (Betancourt, 1990). Those with this prosocial personality orientation have an enduring tendency to feel concern for others' welfare which drives their philanthropic actions (Penner and Finkelstein, 1998 in Michel, 2007).

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Empathy as a driver of spontaneous disaster volunteering was identified in studies by Safrilsyah, Jusoff and Fadhil (2009) and Barraket et al. (2013). Following the 2004 tsunami which devastated the Indonesian province of Aceh, killing more than 130,000 people, the suffering of victims generated empathy amongst tsunami volunteers, forming the dominant volunteering motivation (Safrilsyah et al., 2009). In the 2011 Brisbane floods, registered volunteers determined that their emotional response to the unfolding crisis was the strongest intrinsic factor which motivated volunteering (Barraket et al., 2013). This included positive feelings, such as feeling lucky (Barraket et al., 2013). These two studies indicate that various positive emotions may drive volunteering behavior as a disaster response. However, to date, the range of emotions associated with volunteering behavior appears to be unidentified.

Negative emotions. Others suggest that not all helping is altruistically motivated. According to Cialdini et al.'s (1987) negative state relief model, helping behavior is motivated by an egoistic desire to relieve negative feelings in order to return to a positive emotional state. When we view others in distress, it produces a negative emotional response within us, such as sadness, prompting helping behavior. Further, because prosocial actions have been rewarded since childhood, they have become a conditioned stimulus that increase self-esteem and personal gratification (Silva, et al., 2009). Thus altruistic behaviors are conducted for the egoistic reason of personal mood management (Cialdini et al., 1987).

Negative emotions motivating volunteering during disasters was identified in three studies (Barraket et al., 2013; Beyerlein and Sikkink, 2008) In examining emotional responses to the 9/11 terrorist attacks on New York, those who experienced sorrow as

a disaster response, compared to those not experiencing sorrow, were 46% more likely to volunteer (Beyerlein and Sikkink, 2008). In a survey of Australian disaster volunteers, first time volunteers who were currently volunteering rated "upset at what was happening" higher than the other groups, suggesting this was a factor that motivated them to continue volunteering (Barraket et al., 2013). Interviews with Brisbane flood registered volunteers reported feeling guilty about not being directly flood-affected (Barraket et al., 2013).

The role of positive and negative emotions in disaster volunteering

These studies suggest that both positive and negative emotions coexist as a disaster response, motivating volunteering behavior. Observing a person in need usually provokes mixed emotions of empathy and personal distress which occur simultaneously and influence helping behavior (Carrera, Oceja, Caballero, Muñoz, López-Pérez, and Ambrona, 2013). Yet each emotion has a very different nature: empathy is an *other-oriented* emotion that evokes the altruistic motivation to reduce the other's need; personal distress is a *self-oriented* emotion that evokes the egoistic motivation to reduce one's own aversive arousal (Batson et al. 1981, 1983 in Carrera et al., 2013). Carrera et al.'s (2013) two studies demonstrated that helping behavior is determined by which emotion dominates during an unfolding emotional experience – and how psychologically easy it is to avoid helping. If empathy is stronger than personal distress, our aim is to alleviate the victim's suffering, no matter whether it is easy or hard to avoid helping. Conversely, if personal distress is stronger than empathy, helping behavior will be high only when we think that our discomfort will last unless we help; but if we think that our discomfort will vanish by leaving the situation, helping will be low.

Congruent with Beyerlein and Sikkink's (2008) contention that the divergent effects of distinct emotions mobilize volunteering behavior, it is posited that both positive and negative are associated with volunteering behavior in the Brisbane floods. This leads to the first research question.

RQ 1: What was the role of emotions in motivating volunteering in the Brisbane floods ?

Feelings of responsibility

As noted earlier, personality factors (the prosocial personality) determine levels of experienced empathy; this empathy then drives helping behavior. Embedded within this prosocial personality orientation are feelings of responsibility for those in distress (Penner and Finkelstein, 1998, in Michel, 2007). As individuals, our personal feeling of responsibility drives us to help others in need (Beyerlein and Sikkink, 2008). This basic human need to help others is the strongest motivator driving volunteering (Guy and Patton, 1989). We consider it a social responsibility to help those who are in need without giving thought to personal rewards (Schwartz, 1975 in Tong, Hung, and Yuen, 2011). Volunteers help others because people believe that they *should* do it (Tong et al., 2011).

Research on Hurricane Katrina (Michel, 2007), 9/11 (Beyerlein and Sikkink, 2008), and the Brisbane floods (Barraket et al., 2013), has identified feelings of personal responsibility – the "should" and "ought" to help factors – as motivating volunteering behavior. Following Hurricane Katrina, more than 92 percent of those surveyed

(volunteers/non-volunteers) felt that they had a personal responsibility to help the victims, although this did not translate into actual volunteering hours for most (Michel, 2007). In response to the 9/11 New York terrorist attacks, those who volunteered, compared to those who did not, felt they had a moral responsibility to help others in need; each additional unit increase in responsibility feelings increased volunteering likelihood by 23 percent (Beyerlein and Sikkink, 2008). Feelings of responsibility to help emerged in a survey of registered Australian disaster volunteers and in interviews with registered Brisbane flood volunteers (Barraket et al., 2013). The need to help and support others rated highest for Australian disaster volunteers, while two of the 10 Brisbane flood volunteers discussed their moral responsibility to volunteer (Barraket et al., 2013). It is similarly expected that personal feelings of responsibility were associated with spontaneous volunteers in our study. This leads to the second research question.

RQ 2: What role did feelings of responsibility play in motivating spontaneous volunteering behavior in the Brisbane floods?

Extrinsic Factors

A number of external factors are considered to influence volunteering, including social network ties, peer pressure, and communication factors, including social media networks. Their role in volunteering behavior is discussed in this section.

Social network ties

The social networks that develop through friendships with peers can strongly influence volunteer motivations and actions (Jones, 2006). Strong social network ties

encourage pro-social behavior in volunteering, creating a "behavior expectation" for members within a social group to help others (Tong et al., 2011, p. 351). Many individuals only volunteer when asked to do so, and there is a strong social pressure to agree to participate when it is a friend or close acquaintance who has asked (Freeman, 1997; Jones, 2006).

Research on social ties found that the closer individuals are to their friends and family, and the more hours they spend interacting with them, the more likely they are to volunteer and to dedicate more hours to volunteering (Jones, 2006). Similarly, a study investigating prosocial behavior in Macau found that a stronger social network was related to higher helping intentions and longer volunteer work hours (Tong et al., 2011). This connection was based on the size and respect amongst those in the social network (Tong et al. 2011). For this reason, volunteer recruitment is most successfully conducted through asking friends, family and co-workers to join in volunteering efforts (Freeman, 1997). Congruent with these studies, it is expected that interpersonal social ties, and the attendant peer pressure, played a role in motivating disaster volunteer response in the Brisbane floods:

RQ3: What role did peer pressure and family or friendship networks play in encouraging volunteering behavior?

Communication: the role of social media

With each new disaster, more and more individuals turn first to online sources, including social media, for the most recent information on the disaster and relief efforts (Hughes et al., 2008). Social media includes social networking sites (such as *Facebook*), blogs, micro-blogs (such as *Twitter*), social book-marking, social

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networking, forums, and the sharing of audio, photographic and video files (Balana, 2012, cited in Alexander, 2013). During the 2011 Brisbane floods, social networking technologies were an important source of raising the population's crisis awareness and keeping them updated (Barraket et al., 2013).

Volunteers use social media not only to receive information, but to organize relief efforts through *Facebook*, *Twitter*, *Wikipedia* (Hughes et al., 2008), and blogging sites (Macias et al., 2009). Social media allows the public to dispense with "information gatekeepers" (Alexander, 2013), including disaster response organizations who traditionally manage the volunteer workforce.

Following Hurricane Katrina in 2005, bloggers used the Internet to organize such forms of assistance as manual labour, donations, rescue assistance, and offers of temporary housing (Macias et al., 2009). During the Haiti earthquake in 2010, volunteers used *Twitter* to create disaster awareness and mobilize help (Yates and Paquette, 2011 in Cheong and Cheong, 2011). In the immediate aftermath of Hurricane Sandy, which caused severe damage across the eastern United States in 2012, activists set up their own emergency aid through an informal online movement called "Occupy Sandy," establishing ad-hoc feeding and supply stations in New York and New Jersey neighborhoods (Jones, 2013). During the 2011 Brisbane floods, an analysis of more than 6,000 *Twitter* tweets highlighted that flood volunteering information was included in re-tweets (Cheong and Cheong, 2011). These studies suggest that social media plays an increasingly important role in volunteering. However, what isn't known is the role that social media played in individuals' recruiting of others in the Brisbane floods.

The previous section suggested the importance of social networks in aiding volunteer recruitment. Extrapolating this to large online social networks such as *Facebook*, it is expected that volunteers may have used social media to recruite others, or may themselves have been recruited via social media. This leads to the final question.

RQ4: What role did social media play in volunteer motivation and recruitment in the Brisbane floods?

Methodology

Four months after the Brisbane floods, we conducted interviews with 30 volunteers who formed part of the "Mud Army" cleanup crew. Semi-structured interviews facilitated exploration of the subjective meanings and interpretations that people gave to their experiences and allowed for unexpected and interesting data to emerge (Horton, Macve and Struyven, 2004). Questions were pre-tested in interviews with six "Mud Army" volunteers recruited via convenience sampling. Congruent with Horton, et al.'s (2004) recommendation, interviews were digitally sound recorded for accuracy, with the participants' permission. The 20 minute interviews were followed by 10 minutes of interview reflection and note-taking on key points. Consent forms assured interviewee confidentiality. Participants went into a draw to win one of three prizes of a $40 cinema gift card.

Participants

Purposive sampling ensured that the selected interviewees were those most relevant to address the research questions (Bryman, Becker, and Sempik, 2008). Participants were initially recruited via a study call on the volunteer registration website,

Volunteer Queensland, then by snowball sampling. Snowball sampling refers to the practice whereby participants are asked to suggest additional individuals who also may be qualified to participate (Lowe and Fothergill, 2003; Horton, et al., 2004). The participants volunteered for between one to 10 days (M_{days} = 3.7), were aged between 18 to 61 years (M_{age} = 31), earned between US\$18,000 to \$155,000, and there was an even gender mix. Most were unregistered first-time volunteers who lived adjacent to flooded areas.

The data were analysed using thematic analysis following Boyatzis' (1998) guidelines. Thematic analysis encodes qualitative information and so requires the use of an explicit "code" or list of themes (Boyatzis, 1998). A theme is a pattern found in information and may be generated deductively from theory and prior research, or inductively by developing new themes (Boyatzis, 1998). In this case, themes were generated from theory, with new themes allowed to emerge. With a small sample size, descriptive use of thematic coding is advised due to the lack of reliable statistical generalisation to the population sample (Joffe and Yardley, 2003). It is also appropriate when the study methodology requires enhancing the clarity of the findings (Boyatzis, 1998).

The data analysis took an iterative approach, cycling back and forth between the transcripts to identify themes: emotions, responsibility, social networks, social media and others. To sort emotions into relevant categories, we applied mainstream psychology's research on emotional lexicon and prototypes. We used Shaver, Schwartz, Kirson, and O'Connor's (1987) list of 135 emotions sorted into six commonly-accepted emotion categories: positively-valenced emotions of joy and

love, negatively-valenced emotions of anger, fear, and sadness; and an emotion often considered neutrally-valenced, surprise; and Storm and Storm's (1987) cluster of 193 semantically-homogeneous groups of emotion terms grouped into categories highly similar to Shaver et al. (1987).

Results

To elucidate results, quotations are provided, with indications provided of those that exemplify typical statements and those which were exemplars of less commonly held opinions.

Research question 1 considered the role of emotions (positive/negative) in motivating volunteering in the Brisbane floods. The volunteers reported a variety of emotions, not just prior to volunteering, but while viewing flood damage via media reports and on site, towards flood victims, experienced as part of the cleanup crew, towards the cleanup work, and in response to work recognition. The situation that elicited the vast majority of emotion words was the cleanup work. Participants articulated 46 different emotion words across the six categories of emotions: 18 joy words, 10 sadness words, six fear words, five love words, four anger words, and three surprise words. Table 1 lists the sorted emotion words in descending order of use, with asterisks next to words heavily repeated by volunteers.

Emotion words in each situation are now explained with comments that typified the described emotions.

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Table 1 Elicited Emotion Words

Situation	Sadness	Joy	Surprise	Love	Anger	Fear
Viewing floods on TV or firsthand	Sorry* Sad* Upset Bad Awful Guilt Embarrassed		Shocked* Amazed Surprised		Frustrating	Concerned Distressed Worried Disturbed Frightened
Towards flood victims	Sorry* Sad * Awful			Compassion* Empathy Sympathetic		
As part of the cleanup crew		Proud* Happy Enjoyment Good Nice	Amazed	Compassion* Lovely	Despise	
Towards cleanup work	Sad Depressing Down Disappointing (not being called up)	Happy* Good* Pleased* Proud* Fun* Satisfied Elated Rewarding Gratifying Glad Excited Warm Light-hearted Nice Amusing Upbeat	Surprise Amazed		Disgusting Frustrated	Fear Worried Distressed Concerned
In response to work recognition	Embarrassed*	Proud* Grateful		Appreciated*		

Towards the flood damage, volunteers reported primarily sadness and surprise. A

male university student provided a typical response: *"I felt pretty bad….pretty upset*

and in shock as well. I never thought it would be so bad." "Devastating" was

commonly used. Others, particularly those whose neighbors were flooded, felt guilty

or embarrassed about not being affected. Fear words applied to personal distress. One

older female volunteer said*, "I felt quite distressed, knowing this was my city and my*

home that was flooded...it was an unusual experience to sit and watch that in the comfort of my own home."

Some felt surprise on arrival at flooded sites. One young male volunteer said, *"You don't get smell through television and social media. That's what really hits you when you get down there – the smell and the mud. So you're walking though it and realize that all of this is through people's houses. It really changes your perspective."*

Similarly, towards the flood-affected, our volunteers reported sad and love category words. One older married woman said she felt, "v*ery compassionate. I felt great affinity for the people...the whole of the flood disaster moved me very deeply."*

As part of the cleanup crew, there was a strong sense of pride and other joy emotions. One mature-aged woman with grown up children described the patriotic pride felt amongst volunteers: *"There was a huge sense of being proud, of being a Queenslander; just proud to be out there actually being able to help as many people as we possibly could....[The sense of community] basically cemented that absolute pride, 'there's nothing that can touch a Queenslander.'*

The cleanup work and seeing its results elicited an outpouring of emotion words, far more than for any other situation, overwhelmingly joy category words with pride and a sense of reward being very common. As one said, *"...everyone got in and did what they had to do and were happy to do that...(there was) a sense of pride and fulfillment."* A high number of volunteers spoke about the sense of community spirit and spirit of fun that emerged working with other volunteers. For example, *"you form*

a bond, a camaraderie, it makes everything a bit more fun when you feel down and everyone starts making jokes...."

Most highlighted the general positive spirit on the streets and the socializing amongst volunteers. *"Among the volunteers it was ridiculously positive, I've never seen so many positive people in such a confined area ... and it's good to know that people still hold these attitudes and ... if help is needed that people will show up and that they are very friendly...(we were) sharing some interesting stories and conversations, pulling out some jokes, competitions, and then there was the sausage sizzles, and everyone's gathering around there when they're hungry and telling stories.*

The cleanup also evoked surprise words amongst several volunteers in regards to the difference that a small number of people can make. Being asked about any negative volunteering experiences prompted the small number of negative emotions. Fear words were used by a number of volunteers in relation to concerns about becoming ill from sewage-contaminated mud, but all light-heartedly downplayed this. One young female was distressed at volunteers tossing out possessions that were salvageable as homeowners were too overwhelmed to make rational decisions. *"The amount of help they* (homeowners) *got was overwhelming...they had no power in the situation to control what the volunteers were doing. I kept asking whenever I saw something that could be hosed off, "Do you want to keep this?" and they* (the homeowners) *were like, "Oh no, chuck it on the pile," ...and obviously that was a problem...whenever I saw people who were just chucking everything out without even trying to look at it to see if it could be saved, it was just horrible."*

Anger words were used to describe three cleanup situations. Disgust was used to describe the feeling of being covered in filth, but volunteers even provided a lighter take on that. One young woman who volunteered with a group of friends said, *"It was really good - the volunteers that were doing the cooking would actually hand feed the people that were working on things, because you couldn't pick anything up by hand, so the poor woman was changing gloves and feeding sandwiches to us."*

Some volunteers felt frustrated at not being able to find people and houses to help. Another word, despise, was used by an older married male volunteer. *"There were lots of interesting community dynamics and a clear separation between onlookers versus those who gave help. Onlookers were despised."*

In regards to recognition for their work, all volunteers spoke about feeling appreciated for help provided to home and business owners, with several even embarrassed by it. For example, a young female volunteer in casual employment said she felt, *"Almost too appreciated… I wished I could have helped more that I almost felt bad (that) I was so appreciated. It seemed like such a small thing to do."*

Others mentioned how touched they were by that appreciation. One volunteer, said: *"I was driving around handing out food and this woman chases me down the road…she said, "I've got nothing else to give, but I have to thank you," and she gave me a small bottle of moisturizer. It was just straight aloe moisturizer cream. I burst into tears because she had nothing left, and it was the last thing she had to give to me. I cry every time I think about it."*

Research question 2 considered the role of feelings of responsibility in motivating spontaneous volunteering behavior. Most volunteers explicitly stated that they felt no expectation, or any obligation, to help. Instead, most stated that it was something they *"just had to do"*, indicating either an innate need to help or a sense of responsibility. One said, *"you're responsible to help because you're part of the community. You couldn't sit there and not help."*

One middle-aged female volunteer working part-time linked feelings of responsibility to both guilt and a natural helping instinct: *"Seeing all the shit (on TV) made you feel like you had to go out there….it was my actual instinctive reaction to say "I want to get out there and I want to help"… You actually feel guilty, well I felt guilty, because we sat here and weren't affected, and yet there were so many thousands of people who were. But it wasn't the guilt that did that, it was the simple fact that I felt I had to get out there and help…once we had seen it on television…it stirred up your emotions….and everything was in your face.*

Research question 3 considered the role that family or friendship networks played in encouraging volunteering behavior. Five younger volunteers either explicitly or implicitly mentioned the effect of peer pressure to volunteer. For example, one young female university student indicated that her friends' *Facebook* postings promoted her volunteering stating, *"If its recruitment from TV, it's not really connected to you. When a friend's sharing on Facebook, it's like them telling you, and you feel more compelled because there's a personal connection to that. You're…doing it because your social group is doing it.*

A young female volunteer who lived adjacent to the floods said, *"When people would volunteer, they would post it on their Facebook status and that encouraged me to volunteer because I was kind of like, "Everyone's volunteering, I should probably go volunteer".*

One young female student indicated that pressure to help came from both her father and boyfriend. *"I definitely felt a duty to help – it was kind of coming from my dad more than anything else – like the whole time my dad kept saying, "C'mon get down there and help….you should be getting out to help …there's so many people impacted and they need help, so why aren't we doing anything?" …And also my boyfriend was helping out and was really eager to get going and if I did go, then I wouldn't feel bad. It's like peer pressure."*

Research question 4 asked about the role that social media played in volunteer recruitment. At least half the volunteers used social media to obtain flood information, particularly through the Queensland Police Service *Facebook* and *Twitter* pages. A smaller number of others used it to find out which areas needed volunteers, and to liaise on flood relief action plans. As one said, *"On Facebook we were contacting friends, reading their updates of what was going on, where they were, going through photos and videos they were uploading…Going through Facebook and seeing which areas were massive disaster zones and which were still okay to get to. It played a huge role, it told me exactly where to go. I had friends logging on saying "my house is completely destroyed, I live here, let me know if you can come" and we'd just hit reply and go "we're on our way."*

However, one volunteer (a married man in his 30s) who used both *Facebook* and *Twitter* suggested that *Twitter* was the more effective forum to match up victims with volunteers: *"I had my phone following Twitter and Facebook through the hash tags...With Twitter, it was so much easier; you just search for a hash tag and immediately it would come up... I think it has a very important role for volunteer recruitment because you can target people directly to their phones. People wanted to go help someone straight away, so they were turning to social media as the quickest way of finding information. I was watching #BNE Helping Hands#, someone put a message saying, "I'm in Ipswich, is anyone needing help?" And then someone's saying, "Yes, I need to help someone.""*

Other findings

Four other key findings became evident from the interviews: helping was used to prevent negative emotion states; registered volunteers felt disappointed when not called upon to help; flood proximity was related to responsibility feelings; and finally, the role of ego involvement in *Facebook* postings about volunteering. These are now discussed.

Several volunteers linked their helping behavior with pre-empting potential negative emotion states. For example, one volunteered with her friends and said, *"If I didn't start helping, probably I would feel a little bit hopeless and guilty."*

The disappointment experienced by one young female casual worker when she wasn't called on to help has deterred her from future volunteer registration. *"I registered to volunteer and didn't hear anything back from them for months, but me and my family*

just helped out family, friends, and local businesses…..It (not being contacted) is not good as it could deter people from doing it again, so it's almost like it has the almost opposite effect of what they were hoping…(In future) I would be reluctant to put my name down on a list; I'd be more inclined to just go out to people who need help."

Three volunteers explicitly linked flood proximity to greater feelings of responsibility. One stated, *"I think generally you should help if you can…But if its somewhere closer, the feeling's stronger."* Another stated, *"It's happening (close) to where I live, so I felt a lot more obliged and actually interested in helping."*

Two young female volunteers speculated about the motives behind posting status updates about volunteering on social media. One said, *"A lot of people may use social media in the sense of "look what I did."* Another added, *" …people might want to volunteer so they can post it on Facebook… A lot of people would have been like, 'Going to volunteer today, good for me' kind of thing."*

In the aftermath of the flood, when it became evident that not all suburbs received the same degree of assistance, despite volunteers being turned away in some suburbs, one volunteer suggested that this was due to uneven TV flood coverage. *"They (the media) weren't really quite balanced in terms of areas they covered. A few weeks later I drove through Goodna and it was completely devastated. There were still piles of rubbish and obviously there was nowhere near as much volunteer work, unlike places I volunteered."*

Discussion

It is evident from this and other reviewed disaster studies that people *will* converge en masse onto disaster sites to help others. Therefore understanding the multiple influences that drive this help is critical for disaster response organisations in order to communicate with, mobilize, and direct the massive spontaneous volunteer workforce that emerges following disasters. To aid this understanding, we examined the role of emotions, feelings of responsibility, social network pressure, and social media in prompting volunteer behavior in the 2011 Brisbane floods.

First, we found that volunteers responded differently to two different stimuli: in response to flood images experienced either firsthand onsite or second-hand via media images, then in response to the flood victims. Viewing flood damage evoked mainly negative emotions of sadness and surprise, plus some fear. However, both positive and negative emotions were felt towards flood victims. The finding that both empathy and sorrow acted as volunteering motivators is congruent with Beyerlein and Sikkink's (2008) 9/11 study results. Consequently, neither the empathy-altruism model (which states that positive emotions motivate helping), nor the negative state relief model (which states that negative emotions motivate helping) individually explain volunteers' emotion response.

Further, we established that volunteers experienced a dynamic positive emotional response. In contrast to flood- and victim-responses, joy emotions dominated volunteers' reports, centring on three situations: being part of the "Mud Army" cleanup crew, towards the work itself, and in response to work recognition. Despite gruelling effort and long hours spent in uncomfortable situations, volunteers spoke of the strong sense of community, of the positive atmosphere with everyone helping

everyone else, of the fun of socialising, and the innate sense of pride that was elicited for their own personal role in making a difference to flood recovery efforts. Negative factors (e.g., health fears) were made light of. The negative state relief model (Cialdini et al., 1987) suggests that prosocial action increases self-esteem. To explain why the volunteer mood on the street was *"ridiculously positive"*, we suggest a model extension: that, the greater the time and effort invested by volunteers, the greater the personal return in the form of higher self-esteem. Earlier we agreed with the negative state relief model's contention that helping behavior is driven by negative emotions elicited by others' distress. We further contend, as the unfolding disaster creates a dynamic emotional process, that volunteering behavior is used to pre-empt potential negative emotions (e.g., guilt) that would occur if no help was provided.

After the 9/11 terrorist attacks, Beyelein and Sikkink (2008) identified a surge in national patriotism, a concept referring to an emotional commitment to traditions. Our study found a similar, but State-based pride. As well as pride in being part of the cleanup movement, volunteers reported a sense of pride in being "Queenslanders" helping other Queenslanders. This may have been spurred by the patriotic framing used by the (then) Queensland Premier, Anna Bligh, who in one media conference stated, *""We are Queenslanders. We're the people that they breed tough, north of the border. We're the ones that they knock down, and we get up again" (Levy, 2011).*

Our second finding that feelings of responsibility created a strong innate drive to help matched other research. Similar to studies on Hurricane Katrina (Michel, 2007), 9/11 (Beyerlein and Sikkink, 2008), and the Brisbane floods (Barraket et al., 2013), our volunteers said they *"should"* and *"ought"* to help. They had a sense of urgency and

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an overwhelming drive to find *"someone, anyone"* they could help. Registered volunteers, frustrated by not being called upon to assist, sought out their own volunteering opportunities. In line with Batson (1987 in Michel, 2007) and colleagues' empathy-altruism hypothesis, we agree that feeling responsible to help is primarily driven by internal forces, rather than by external pressures. This inner drive compelled our volunteers – and perhaps many thousands of others – to assist.

Our investigation of social networks' role in encouraging disaster volunteering yielded similar results to studies by Tong et al. (2011) and Jones (2006), who found that close personal ties encourage civil volunteering. Although the previous section indicated that most volunteers felt an innate responsibility to help, a small number of younger volunteers were encouraged to volunteer either via subtle peer pressure, usually via social media, or by more directly voiced expectations from friends and family. Previous research on Gen Y has indicated that they rank comparatively lower than other age cohorts in both their commitment to social responsibility and desire to have a strong social impact (Ng, Schweitzer, and Lyons, 2010). This may explain why responsibility feelings did not motivate all volunteers.

A number of younger volunteers embedded in the large online friendship network that is *Facebook* either promoted volunteering amongst their friendship networks or were encouraged to volunteer via *Facebook*. Thus peer pressure was exerted via social media to drive volunteering efforts. This appears little researched.

Social media also provided information to allow volunteers to bypass traditional gatekeepers to determine for themselves their helping behavior. An exemplar is the

disappointed volunteer who registered online, wasn't called to help, but still provided assistance anyway. With the increase in online disaster convergence behavior (see Macias et al., 2009), and the little existing research on the use of social media in volunteer recruitment, this trend requires further investigation. Although Bruns et al. (2012) noted the high use of *Twitter* during the floods, only one participant mentioned its use in assisting volunteering behavior.

This study had a small sample size, an age group skewed to the younger demographic, and made some use of snowball sampling. Reliability was strengthened via explaining the data collection and analysis process. Reliability and validity were enhanced by ensuring that the data record used verbatim verbal comments of the interviewees from audiotaped transcriptions and, for the emotion discussion, using tabulated data.

Conclusion and recommendations

Although volunteer convergence may be problematic to relief efforts, we agree with Lowe and Fothergill's (2003) call for a reframing of spontaneous volunteers as a resource for proactive engagement in disaster response and recovery. In this section, we summarise the key disaster management and communication lessons emerging from our research.

As disasters evoke emotions that are ubiquitous and dynamic, they motivate an outpouring of community help. To avoid a tsunami of spontaneous volunteers descending upon impacted sites to help *"somebody, anybody",* harnessing and directing this volunteer workforce is a critical first imperative. In an information vacuum, volunteers are increasingly likely to bypass disaster management

organizations and use social media to select their own sites to help out. Disaster response organizations therefore require coordinated efforts providing key messages that instruct, direct, and deploy volunteers to sites where their efforts are most needed. These key messages need to be communicated using integrated mass media and social media communication strategies. This requires that emergency service organisations review both their current media and social media practices and presences. In particular, comprehensive, flexible strategies using different social media platforms need to be established providing a high frequency of disaster updates.

Further, in line with Bruns et al.'s (2012) recommendation, coordination between different emergency and government services and the media, plus the use of one twitter hashtag, will minimize conflicting messages and correct inaccurate rumors while disseminating crucial emergency information. The campaign "Occupy Sandy" also mastered the call-to-action: each message indicated exactly what interested volunteers could do to help (Jones, 2013).

Brisbane floods reports suggested that most volunteers, like those interviewed, were unregistered, converging on areas receiving strong media attention. Anecdotal evidence suggests that TV news coverage focused on areas closest, and most road-accessible, to news stations. These areas attracted so many volunteers that flooding evidence was rapidly eradicated while many other areas struggled with on-going recovery efforts weeks, and even months later. This suggests that continuous evaluation of social and mass media disaster coverage should include identification of areas receiving most disaster focus in order to re-deploy volunteers to other areas needing help.

As Carrera et al.'s (2013) studies demonstrated, helping behavior is also determined by how psychologically easy it is to avoid helping. This may explain why, following Hurricane Katrina, although almost all surveyed felt a personal responsibility to help, most did not (Michel, 2007). If observers are aware that the victims' suffering will continue after they leave the situation, no matter what the dominant emotion elicited, they are driven to help (Carrera et al., 2013). Particularly in the aftermath of the disaster, as volunteer numbers start to wane, it is suggested that, all key media announcements should highlight that the continuing distress of victims may only be speedily resolved with the ongoing help of the wider community.

Volunteer recruitment communication also needs to highlight the distress and suffering of disaster victims to evoke sadness to prompt volunteer behavior as a coping mechanism, as well victim empathy to evoke feelings of responsibility to help. To elicit feelings of responsibility, key messages should emphasise that this is happening in *your* community to people like *you* who are now doing it tough and that, if everyone pitches in to help, they can make a real difference and ensure the community recovers that much faster.

As our research and that by others (e.g., Bruns et al., 2012) emphasized, social media is important not just as a communication tool, but because it can provide subtle peer pressure to volunteer, particularly for younger participants. Highlighting recommendations to volunteer with groups of friends may form a useful strategy to recruit the younger demographic. It may be useful to identify for the media such groups who provide evidence of the positive volunteering and "can do" spirit.

Pride in the cleanup work emerged as an important volunteer emotion, requiring

further investigation, with some ego involvement evident via posting on *Facebook*

status updates regarding their volunteering. Communicated messages could tap into

this *zeitgeist* with key messages focusing on volunteers as local heroes.

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