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The self-organising of youth volunteers during the *Rena* oil spill in New Zealand

Sarah Lockwood[a], C Kay Weaver[b], Debashish Munshi[b] and Mary Simpson[b]

[a]University of Waikato, Tauranga, New Zealand; [b]University of Waikato, Hamilton, New Zealand

ABSTRACT

This study explores the communication and organising of youth volunteers during a crisis, focusing on how they conceived, framed, and executed self-organising efforts during the 2011 *Rena* oil spill in New Zealand. It offers insights into the intersections of self-organising, youth volunteering and crisis events which have not been researched before. The study addresses two core research questions: 1. how was 'volunteering' conceptualised by youth volunteers involved in the *Rena* crisis; and 2. how did these volunteers communicate and self-organise during this crisis? The findings indicate that self-organising emerged out of a resistance towards structured responses and as a reaction to the inability of the official volunteer response to meet the needs of the community. Self-organised efforts were particularly attractive among youth volunteers because they offered flexibility, required minimal administrative processes, and fostered an environment of innovation and creativity. The volunteers' youthful energy and technological aptitude additionally drove their self-organised responses. The study identifies the considerable challenges that crisis officials faced in utilising youth volunteers despite the significant advantages of self-organising.

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Introduction

On 5 October 2011, New Zealand faced an unprecedented maritime and environmental crisis when the MV *Rena* (*Rena)* grounded on Astrolabe Reef off the Bay of Plenty and leaked over 350 tonnes of oil into the ocean. Despite Maritime New Zealand's (MNZ) reluctance to incorporate volunteers into their official response plan, the public demanded to be involved. Consequently 'Operation Beach Clean' (OBC) was established to train, recruit and dispatch volunteers under MNZ operations. The significant volunteer clean-up effort that ensued was considered a success by both organisers and volunteers (Hunt et al. 2014). Because of the volunteer efforts, pollutant levels across Omanu and Papamoa beaches were reduced to near original baseline measures within 3 months of the spill (Donald 2012). However, during this time significant numbers of youth volunteers initiated and participated in their own self-organised volunteer efforts, and many withdrew from OBC to take part in these other responses. This article focuses on how these youth volunteers conceived, framed and executed their self-organising efforts, and

CONTACT Sarah Lockwood sjl18@students.waikato.ac.nz

examines how and why they took to self-organising despite the existence of an official volunteer programme.

Although crisis response has traditionally been the domain of professional officials and emergency organisations, youth volunteers are increasingly participating in such responses with a fresh range of innovative methods and solutions (Lewis 2013). The effective integration of youth volunteers into crisis response plans is becoming more prevalent (Palen et al. 2009), and their efforts have been identified as often more effective than those provided by official response organisations (Helsloot & Ruitenberg 2004). Yet, apart from a small number of studies focusing on volunteers who participated in OBC (see Sargisson et al. 2012; Hunt et al. 2014), there has been no research on the role of self-organised youth volunteers who participated in the response to the *Rena* crisis outside of the official volunteer programme.

Despite an abundant literature on volunteer response to crises (see Stallings & Quarantelli 1985; Helsloot & Ruitenberg 2004; Brennan et al. 2005; Gibbons 2007; Plummer et al. 2008; Koritz & Sanchez 2009; Qu et al. 2009; Dass-Brailsford et al. 2011; Rotolo & Berg 2011), there are no studies on the intersections between volunteering youth, crisis and self-organising. Current research about youth volunteering in the Christchurch earthquake, for example, has focused on the Student Volunteer Army's display of interaction rituals (Lewis 2013), resilience (Giovinazzi et al. 2011; Mamula-Seadon et al. 2012; Hayward 2013; Bourk & Holland 2014), service learning (O'Steen & Perry 2012) and use of social media (Howell & Taylor 2011; Bunker et al. 2013). Two issues in particular have been neglected in this crisis volunteering literature: age demographics and self-organising. Firstly, the lack of emphasis on age demographics is surprising because age has been identified as an influential factor in volunteer engagement, motivation and participation (see Wilson 2000; Rehberg 2005; Marta & Pozzi 2008; Musick & Wilson 2008). Furthermore, research suggests that in comparison to their peers, youth volunteers have higher levels of optimism, self-efficacy and self-esteem (Hart & Fegley 1995; Pancer et al. 2007). Studies over the past two decades have addressed the changing nature of youth volunteering by: 1. contextualising it within a theoretical frame of reflexive modernisation (Beck 2002; Read 2010) and late modernity (Giddens 1991; Beck 2002); 2. focusing on the shift from collective to individualistic or reflexive tendencies (Eckstein 2001; Beck 2002; Hustinx & Lammertyn 2003; Marta & Pozzi 2008); and 3. addressing the growing trend in episodic volunteering (Auld 2004; Styers 2004; Handy et al. 2006; Glasrud 2007). However, there is very little emphasis on the organising behaviours of youth volunteers. As far as self-organising in crisis situations is concerned, the limited research on volunteers so far is dominated by a technological focus on tools of communication (see Stallings & Quarantelli 1985; Palen et al. 2009; Starbird & Palen 2011; Starbird 2012), rather than the organising of the volunteers themselves. In specifically exploring the self-organising efforts of youth volunteers during the *Rena* crisis, we begin with a background to the crisis, then outline the methods of our study, and finally present our findings.

Background to volunteer engagement in the *Rena* oil-spill

The MV *Rena* was a container ship owned by the Greek shipping company Costamare, chartered by the Mediterranean Shipping Company (MSC) at the time of the event. Although the ship was sailing in favourable conditions on its route from Napier to

Tauranga harbour, the captain was faced with the prospect of a costly delay at sea and so deviated from the planned route by plotting a shortcut. This meant that the ship would reach its destination before the ebbing tide, arrive on time to meet a pilot vehicle, and avoid accruing further expenses (Cooke 2012). This decision resulted in the *Rena* striking the Astrolabe Reef at 17 knots per hour, placing its crew, 1700 tonnes of heavy fuel oil, 200 tonnes of marine diesel oil and 1368 containers in a dangerous situation. Oil from the *Rena* began washing ashore within 5 days of the grounding and, within 8 days, more than 350 tonnes of oil had escaped and between 30 and 70 containers washed overboard. Bad weather and high seas soon saw the crew evacuated and further damage to the ship's hull. As oil and containers began to wash ashore, the severity of the event began to be experienced by local communities. Concerns about the impact of the *Rena*'s grounding were further exacerbated when aerial footage showed a large crack in the ship's hull, increasing fears that the ship could soon split and sink.

The environmental effects of the disaster were significant: the 350 tonnes of heavy fuel oil and additional marine diesel oil that leaked from the ship left over 2000 marine birds and mammals either dead or covered in thick oil. Additional environmental risks were posed by the 110 tonnes of hazardous goods known to be inside damaged containers, as well as by the Corexit dispersant that MNZ used in an attempt to disperse the spilt oil. Overall, MNZ used 3000 tonnes of Corexit, despite evidence of its deadly effect on marine life when mixed with oil (Muncaster, this issue).

The *Rena* oil spill had a debilitating effect on the local community. Vivid images of the thick, residual oil from the grounded vessel washing on to the coast of the popular tourist Bay of Plenty region, and coating rocks and marine mammals, portrayed the severity of the devastation. The magnitude of health risks was so high that MNZ declared a public exclusion zone along the coastline. In terms of the economic impact, the local tourism and fishery businesses were acutely affected, having to lay-off staff and lose clientele in the process. Government agency costs associated with the ship's grounding were in excess of $46.8 million (Campbell 2013). This crisis also had a significant cultural impact on the lives of many Māori (the indigenous people of New Zealand) who place great importance on mauri, the force that binds all things together (Marsden & Henare 1992). Cultural values were offended, with perceptions that the *Rena*'s grounding constituted disrespect for land, protocols, cultural ancestry, burial places, and obligations and responsibilities to whānau (family) and hapū (tribe) (Mikaere 2014). The disaster was particularly damaging for Māori residing on nearby Mōtītī Island, who use the nearby water to gather kaimoana (seafood) and for recreation. There was widespread feeling that with the ship's grounding on the reef, Māori kaitiakitanga (the obligation of stewardship or guardianship) to look after the rohe (resources) of their people for future generations was tarnished; this was an insult to their mauri, and damaging to their spiritual connections to the reef itself (Mikaere 2014).

The grief, frustration and despair of local people as they struggled to come to terms with what had happened led to growing public demand to be involved in response efforts. However, MNZ was hesitant to engage volunteers, especially because decision makers were aware of negative consequences of volunteer engagement in previous oil spills. These included lack of specific training (Griggs 2011), conflict surrounding monetary compensation to both paid workers and volunteers (Palinkas et al. 1993), an inability of

volunteers to cope with the labour-intensive tasks and volunteer resistance to accepting supervisory directions from authority (Moller 1997).

With growing public restlessness about the situation, the beginnings of informal volunteer activity, and media criticism of an inadequate official response, MNZ decided to allow controlled volunteer participation in the clean-up. As a result, the OBC, comprising a system to register, train and equip volunteers in beach clean-up operations, was established. Administrative glitches notwithstanding, 2000 members of the public registered as volunteers within 7 days of OBC's establishment (Harper & Lundy 2011). By day 11 this had swelled to over 6700 (Gillespie 2011), and would eventually reach a total of 7950 registered volunteers who collectively contributed 19,725 hours to beach cleaning (Backhouse 2011). The volunteer response was hailed as a success and described as the first ever effective volunteer response following an oil spill (Gillespie 2011).

Despite the initial success of OBC, it became clear that individuals and groups had become frustrated with its registration and administrative processes, and the limited timeframes they were permitted to take part in the initiative. Many found that their offer to participate was not taken up, that the schedules they were given to be involved in did not suit their availability, and that their capabilities were not utilised to full capacity. Consequently, many young people initiated or participated in separate, self-organised efforts. These ranged from informal gatherings of Facebook friends for beach cleans, surf groups rallying together and cleaning debris in acutely affected nearby islands, to more formal, organised fundraisers and the provision of support for under-resourced areas of the community. Examples of such efforts by youth volunteers included organising food deliveries to Mōtītī Islanders via helicopter dispatch and to the organised volunteer units along the stretch of the Bay of Plenty coastline. In the next section, we outline the research design and the methods used for this study on the self-organising efforts of youth volunteers during the *Rena* crisis.

Research methods

This research draws on qualitative interviews and a thematic analysis to explore the self-organising efforts of youth volunteers during the *Rena* oil spill. Participants for the research were recruited via a snowball sampling method which aims to identify effective linkages, or 'bonds', to locate members of special populations to provide information not only about themselves, but also about those they nominated to be involved in the study (Frank & Snijders 1994). The *Rena* Operation Volunteer Manager provided a logical start point as he had access to a large number of registered volunteers.

Through the snowball sampling method, 53 interviewees including 27 women and 26 men were recruited to participate in the study. For the purposes of this research, 'youth' was classified as between 16 and 29 years of age. Of the research participants, 38 fell under this classification, of whom 27 were tertiary students. The other 15 participants, who did not fall within the 'youth' classification, were included in the research because they held positions of authority in the volunteer response and had high levels of engagement with the youth volunteers. These 15 participants were from groups such as MNZ, Ngāi Te Rangi Iwi (Māori peoples from the Tauranga area), Sustainable Coastlines, Braemar and the Penguin Monitoring Programme, some of which formed their own self-organised responses. Overall, 51 of the 53 participants were actively involved in self-organised

efforts, some exclusively, some following an unsuccessful experience after engaging with OBC, and some in addition to their participation in OBC. The remaining two participants were involved in managing OBC, and therefore were not actively involved in self-organising efforts, but were interviewed because they had high levels of engagement with these individuals and groups.

The study was guided by the principles of qualitative interviewing (Gubrium & Holstein 2002; Fontana & Frey 2003) which strives 'to capture and understand individual definitions, descriptions and meanings of events' (Burns 2000, p. 388). To help understand individuals' descriptions and meanings, semi-structured interviews were used to enable participants to convey information in their own words and perspectives, using their own terminology (Patton 2002; Marshall & Rossman 2010; Denzin & Lincoln 2011; Creswell 2013), and thus capture the complexities of their own individual perceptions and experiences (Patton 2002). Each interview lasted between 35 and 65 minutes, with participants discussing their opinions and experiences with both the formal and informal volunteering efforts of young people, the relationships between youth volunteers and others, and their perceptions before and reflections after the *Rena* clean-up response. Participants also discussed the organisation and communication skills of the youth volunteers involved in the *Rena* clean-up, and the role of social media in this response. Recorded and then transcribed, the interview data were transferred into NVivo10 qualitative software and analysed using thematic analysis, drawing on King & Horrocks' (2010) criteria of researcher interpretation, repetition and distinction. The analysis recognised patterns in the text which were coded and sub-coded. In reporting the findings, we have removed the names of participants and organisations to protect their confidentiality.

Findings

The participants described ways in which self-organised efforts were initiated and developed by youth volunteers; why such efforts were so attractive to them; and how generational characteristics of youth volunteers influenced their self-organising behaviour. A number of themes emerged from the analysis of the transcripts and, in presenting the findings, we report on the most prominent of those themes. A selection of quotations from the interviews are used to illustrate these themes.

The dynamics of self-organising

The first key theme centred on how particular features of the OBC acted as catalysts or triggers for youth engaging in self-organised efforts. Firstly, youth volunteers found that they were unable to meet the 'structured' demands of the response, and were 'put off' by the OBC's arduous administrative processes: 'I wasn't always available in the specific times they allocated so because I found myself unable to help in those areas, I looked for other ways that I could help' (Female volunteer, 20).

This sentiment was echoed by 22 of the 38 youth volunteers interviewed. Although many of the participants initially registered with OBC, they withdrew when it came to 'filling out all the forms' and subsequently went on to do their 'own thing'. Numerous participants also said that they often 'felt guilty' if they got a text or email from OBC and were unable to make the time slots due to university or work commitments. Because they

strongly disliked the feelings this evoked, 13 of the research participants had disengaged from the OBC. In addition, two participants specifically noted that they didn't want to feel this 'guilt' and so refrained from even joining OBC. In contrast, self-organised groups appeared to offer far greater levels of flexibility: 'We had lots of young people join our group … when they came to us, we were just much more flexible and they were able to work in what they could manage' (Female volunteer leader, 30-plus). Youth volunteers also found that the OBC did not meet their expectations: 'We didn't just want to sit around and wait for a call. It was frustrating for us having to sit around and wait to do something that we knew we could easily do' (Male volunteer, 25).

As such, the 'frustrations' and 'annoyance' they experienced appeared to translate into a more practical response for these volunteers. An example of these frustrations could be seen in the giant 'CLEAN ME' words sculpted into the sand by a group of polytechnic students after being told they were not allowed to clean up the oil themselves. This initiative was sparked by a 22-year-old female participant:

> For a lot of us young people, we felt that there had been quite a slow response to get the oil off the ship. We just wanted to put on a bit of pressure on the officials to get things under control. (Female volunteer, 21)

This person quickly organised a Facebook page, inviting fellow tertiary students and friends to join the group. After a day of sculpting the text in the sand, they had created a media event. The image (strategically placed at the base of Mount Maunganui, an iconic tourist spot, featured on all major television channels that night and in all mainstream and local newspapers the following day. It filled social media newsfeeds, adding to the mounting pressure that authorities were already facing from the public about the response. When probed on whether harnessing media attention was the motive behind the initiative, the response again was much more practical:

> we were doing it because we had nothing else to do. They wouldn't let us do anything else … . we kept ringing up and they wouldn't answer our calls or get back to us, so we decided that we would just do this. … and then we decided we would just start cleaning up ourselves too. (Female volunteer, 21)

While many of the 27 tertiary students interviewed in this research explained that they were keen to apply their volunteer experience to university projects, others found they were able to draw on their academic training to assist in the crisis response by applying 'problem-solving skills' and 'lateral thinking'. One participant said that he found working with students who were engaged in response efforts outside of OBC to be much more successful as they were 'used to working in small groups and solving problems, just like at school'. One participant noted that he chose to pursue a self-organised response because it specifically 'related to my course'.

At least eight participants looked at the crisis response as a 'project' with most admitting to becoming 'engrossed' and 'obsessed' with the ongoing events and developments. Many reflected on how they would return home from the beach each day, only to seek further information about the crisis:

> [we were] aware of what was happening, tuned into the media, tuned into information that had been gathered by high management … asking political questions, environmental questions … young people were always engaged and wanting more information about what

> was going on … really interested in gathering as much information as they could. (Male volunteer, 20)

Yet another trigger for youth volunteers to engage in self-organising was the fact that many felt particular community needs were not being met and they felt compelled to fill this breach by volunteering to help in these areas. This included clean-up efforts targeted at areas away from the mainland that received little media attention, such as Matakana and Mōtītī islands, and arranging vegan and vegetarian food provisions for wildlife volunteers whose dietary needs were not being catered for.

> We made vegetarian curries and heaps of vegan foods because we thought that if they were working with the animals they would probably eat like that [vegan] … they were so grateful because no one else had taken that into consideration. (Female volunteer, 18)

Again, these responses appeared to reflect a practical and logical way of thinking, which resonated with numerous other participants, five of whom explained that they specifically engaged in self-organising efforts in areas where the OBC was not contributing resources. One participant stated: 'I felt those areas were being left in the dark, that's why we targeted them'. Three other participants reflected on the positive impact these types of responses had within the community, best summed up by one who noted: 'the informal stuff connected better to the community, by far'.

Appealing features of self-organised efforts

The second key theme concerned participants' talk about the comparatively low and non-existent administrative processes of self-organised efforts compared to those of the OBC. Being typically unstructured and non-obligatory, self-organising attracted many youth participants who were becoming increasingly impatient with the delays they experienced working with the OBC:

> I remember one young fellow coming to us and saying 'I cannot wait to get out there and they will not let me go out until I am signed up and I cannot wait for that', so they came to us, and they came in their droves. (Female volunteer leader, 30-plus)

Another appealing feature of self-organising for these participants was the environment of innovation and creativity that it offered. One participant said that by doing their own thing, it was 'far less controlling … more opinions and ideas could be explored'. Nine youth volunteers noted that they offered solutions and ideas for exploration while working with OBC, but that these ideas were never adopted. In contrast, innovative suggestions and ideas were enthusiastically encouraged in the self-organised youth groups:

> Being able to think and have the freedom to test new ideas and have them heard is something that can come from an informal scenario where people are open to new ideas coming in and aren't going to get shot down based on the assumption that they know what is right. (Male volunteer, 23)

Many of these innovative and creative ideas were subsequently put into practice by these self-organised groups, and ranged from more efficient ways to collect oil along long stretches of coast, to inventing cost-effective sieves for picking up small oil globules. Two university student volunteers, who searched for oiled wildlife as part of a group outside

of the official volunteer response, spoke of the inconsistencies and duplication they experienced with the system set up to report locations of oiled wildlife. To address this, the two students decided to capture data in a clear and consistent, systematic, quantitative format by way of transferring field notes into an Microsoft Excel spreadsheet format, drawing on learnings from their university studies. This created significant efficiencies for those volunteers tasked to act on the basis of this data. The initiative was so successful that the data was subsequently used in numerous student research projects, and also in reporting by the official response authorities. This had a profound effect on the two volunteers who noted: 'that they were actually using our ideas was really cool to see … to see that we weren't just soldiers; we were actually contributing. That was really cool' (Female volunteer, 22).

Generational characteristics influencing self-organised behaviours

The third key theme concerned the generational characteristics of youth volunteers, such as their (limited) life experience and technological aptitude, which appeared to influence their self-organising behaviours. Fifteen youth participants, as well as eight participants who held high positions of authority, referred to youth as possessing characteristics of 'inexperience' and 'innocence'. This often led to differing opinions as to its advantage or disadvantage during a crisis, which often depended on whether the participant was a youth volunteer or in a position of authority. However, the strong correlation between youth being 'unclouded' (a word used by two youth volunteers), and their limited consideration of consequence, often resulted in self-organised efforts evolving much more quickly that those requiring administrative oversight:

> At one stage, only the army were allowed on the beach. I didn't want to wait around when I knew I could be utilised so I put on an old dress-up army uniform I had at home and went straight down onto the beach and started putting it in sacks and getting my hands dirty. (Male volunteer, 24)

While wearing an 'old dress-up army uniform' to gain access to the beach clean-up may not have been strictly lawful, such action demonstrates the level of practical commitment and innovative, problem-solving capacities of youth volunteers. Their enterprise was reflected in the comments of 11 participants who held levels of authority within the self-organised responses. One of them referred to the stark comparison between the younger and older volunteers:

> They are fresh; they haven't been crushed by the world yet. Older people have so many problems … younger people are not as tangled up in complications. They are just keen to establish some new connections, learn new things, and act on things they have studied. Also because of their open mindedness they are probably a lot keener as to what is actually going on and still be willing to embrace it and take it in. (Female volunteer leader, 30-plus)

This same participant, who called herself 'in charge' of a self-organised group, also reflected on an instance where she pulled the group out of cleaning in a particular area because of fears that nearby contractors may 'dob us in for not being part of the official programme'. A younger volunteer then proceeded to head straight out onto the site, noting 'this needs to be cleaned, we are cleaning it', in disregard of any threat of consequence. As a result, the group was in fact apprehended by the official contract cleaning crew, which, to her surprise, asked her how they had been so efficient at cleaning such

a large stretch of beach. The young volunteers demonstrated their sweeping technique in which they would all hold hands and walk forward together in a line, an idea the contract team subsequently adopted. This participant noted that 'had it not been for their youthful innocence I would have led the group off the site, and the clean-up would not have been done' (Female volunteer leader, 30).

The role of technology in the self-organising was significant, as nearly all efforts were initiated via digital media. Social media and mobile technology facilitated short-term, focused, small, self-organised efforts. For example, four participants noted how they had each recruited others to assist in their clean-up efforts by creating a 'group' or 'event' on Facebook. In each of these cases, once the clean-up had taken place, the group or event was either disestablished or abandoned.

In larger, ongoing self-organised responses, social networking was used to maintain volunteer retention and harness continued community support. An example of this was the *Rena*-Kai-Run Facebook page. In response to a throwaway comment from a contract worker cleaning the beach that 'he hadn't eaten all day', an 18-year-old female created a Facebook page to draw attention to this issue. Although the founder admitted she did not expect it to get 'really, really big, really, really fast', within 3 days over 435 people had joined the page, assisting efforts in collecting donated and purchased food from the community and delivering it to hordes of hungry contract and volunteer workers along the coastline. Youth volunteers' familiarity with and use of Facebook contributed in other, less direct ways to their self-organised efforts. Their volunteering generated significant social media exposure with youths posting photos and status updates while engaging in their self-organised efforts. These posts drew comments and 'likes' throughout their social networks and resulted in queries about how others could take part. Although motivations around such postings ranged from seemingly innocent ways to keep 'friends and family out of town updated on the progress', and 'to keep reminding people of the ongoing devastation', one youth volunteer offered a more critical point of view, while remaining practical about its positive contribution to the relief effort:

> I think a lot of people were taking photos to put on their Facebook just to say 'I have been part of it', it was like a photo opportunity for them. But if it was only that for them, at least they helped out and did something. At least they didn't sit there and do nothing … I would never hold that against them because they still went down and did something, and that's awesome. (Male volunteer, 22)

The overall feeling of the 38 youth participants was captured by a 22-year-old male volunteer who spoke about all the younger volunteers he came into contact with as being 'very switched on and well networked'. The youth volunteers' use of digital technology and life experiences, and their generational characteristics, played a key role in influencing their self-organising behaviours. The next section discusses the implications of the findings for theory and practice.

Discussion

This study illustrates several unique features about self-organising by youth volunteers during the *Rena* crisis. Firstly, it highlights that demographics are important when understanding a volunteer response to crises. This includes catering to the innovative way of

thinking and the organising and communication behaviours that youth volunteers practice. Secondly, it indicates, from a practical perspective, several challenges faced by organisations engaging with youth volunteers during a crisis situation. One of these challenges is the often unpredictable nature of both youth volunteers and self-organised responses. Given the organisational imperatives of policy, structure, and health and safety processes during crisis events, this requires careful navigation. Additionally, unlike traditional organisations, self-organising systems do not necessarily have any ongoing purpose or intention (Chertow & Ehrenfeld 2012). Because of this, official response organisations can neither predict nor expect that youth volunteers engaged in self-organised efforts will similarly engage in future, ongoing, or subsequent crises. These findings offer some correlation to research by Weller (2008) who found that the Irish youth volunteers he studied were highly risk-averse to engaging in any form of volunteering which affected their identity and biographical work. Drawing on Giddens (1991) notion of the 'reflexive project of the self', Weller (2008, p. 351) identified youth volunteering as an 'attractive form of immersion in civil society'. Weller's study also identified episodic volunteering as a risk-free option for this demographic. In light of this, self-organised initiatives as a form of episodic volunteering may warrant closer examination.

Despite challenges, self-organised efforts can engage motivated volunteers, meet needs within communities, and facilitate innovation and creative responses. It is also important to acknowledge that the perception of these efforts and subsequent outcomes may differ depending on the individual or group lens applied. For example, Lanzara (1983, p. 85) notes that what self-organised groups may view as effective and legitimate, governments may view as 'fragmented, uncoordinated, arbitrary intervention'. Youth volunteers, therefore, often face a conundrum whereby commonly held negative associations of their age-group obscure the specific and often unique forms in which they might make a voluntary contribution to crisis situations (Adams et al. 2009). This suggests that tensions between youth volunteers and officials may potentially contribute as a factor for youth volunteers engaging in self-organising. It also reflects the move towards weakened collective identities of volunteering (Hustinx & Lammertyn 2003) and a weakened or 'temporary commitment' (Marta et al. 2006) to the volunteer organisation.

Another important finding of this study is the use of social media and mobile technology in self-organising during the *Rena* crisis. The creation of both physical and 'virtual spaces' (Weick 1993) provided youth volunteers with areas to congregate in and to communicate their feelings and actions about the crisis and ways to get involved. It was important to the youth volunteers that these spaces were facilitated by youth volunteers themselves, as opposed to 'officials' or 'outside organisations' so that youth were able to openly communicate without censorship or other forms of negatively perceived control exercised by the high levels of administrative processes.

Although this study looked at youth volunteering during the *Rena* crisis, it is appropriate to reflect on the positive impact that this form of volunteer engagement had on many of the individuals who took part in the study. During the interviews, many participants reflected on the positive life changes they had experienced as a result of their engagement in the *Rena* crisis, ranging from continuation of volunteer bird monitoring, through to choosing to study disaster resilience at university, and heading overseas to volunteer for humanitarian causes. These experiences are consistent with research into volunteering which identifies its positive impact on wellbeing and happiness

(Krueger et al. 2001), a reduced sense of depression (Musick & Wilson 2008), enhanced sense of community, collective efficacy and an ability to cope (Paton 2012). All these associations also have a positive impact at a wider, community level. These findings also link to research which suggests that this form of short-term or episodic volunteering is purposely chosen by youth volunteers in their reflexive project of the self in the face of personal constraints such as career aspirations and other hedonistic goals. Although volunteers seemed slightly more altruistic at the onset than being guided by an intention to construct their life course, their decision to volunteer does reflect what Giddens (1991, p. 75) perceives as 'building/rebuilding [of] a coherent and rewarding sense of identity'.

It is important to note that, as a consequence of the *Rena* crisis, MNZ is currently developing national guidelines for its engagement with volunteers and local communities. This reflects a worldwide trend in policy development on the use of volunteers to respond to oil spills (see NRT 2012). Recommendations based on the *Rena* crisis include the need to engage with the local community early in response efforts (Fraser et al. 2012; Ombler 2014). Despite both these reports outlining the critical role that volunteers play, neither mention youth volunteers or volunteers who operate outside of the official response. This, in part, reflects the informal nature of self-organising volunteers where data, information and research about their efforts are neither collected nor are readily available. This research shows that self-organising youth volunteers offer a unique approach to crisis response, which can produce both short and long term positive community outcomes. It is therefore vital that crisis response officials, governments and volunteer organisations understand, acknowledge and support youth volunteers in order to maximise an effective community response.

Conclusion

This study looked at how youth volunteers conceived, framed and self-organised their efforts in responding to the *Rena* oil spill. While the self-organising efforts of the volunteers emerged out of resistance to, and frustrations with, the official volunteer response, these efforts also provided a means to express, organise and communicate in ways that reflected the generational identity and risk averse characteristics of these volunteers. The study showed: 1. that self-organising offered flexibility, minimal administrative processes and fostered innovation and creativity; and 2. that youth volunteers engaging in self-reflexive, self-organised responses were better able to utilise the technological aptitude, energy and networking skills of their generation to create an effective crisis response. The study additionally demonstrates the importance of understanding the intersections of youth volunteering, self-organising and crisis events. It illustrates the need to find ways to validate the contributions of youth volunteers in response to crises, and manage tensions between this demographic group and official organisational responses.

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