'Spontaneous' volunteers? Factors enabling the Student Volunteer Army mobilisation following the Canterbury earthquakes, 2010–2011

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ABSTRACT

'Spontaneous' volunteers have long been recognized for the distinct and important contribution they can have within disaster response and recovery. The emergence of the Student Volunteer Army (SVA) has featured as a success story of crisis volunteerism in international disaster response literature and as a potential blueprint for youth-centred post-disaster civic action. Drawing on in-depth interviews with people involved in the SVA, we provide a framework for understanding the factors that helped enable its mobilisation. In outlining these factors, many of which pre-date the emergence of the SVA, the paper demonstrates that the successful mobilisation of 'spontaneous' volunteers is not necessarily as spontaneous as the term suggests. Our analysis furthers understanding of the diversity of crisis volunteerism and has implications for disaster response practitioners, particularly in recognising the importance of networks of support which exist before and beyond disaster.

1. Introduction

At 4:35am on September 4, 2010, a violent 7.1 magnitude earthquake struck the Canterbury region of New Zealand causing widespread damage to property but no loss of life. That evening, Sam Johnson, a student from the local University of Canterbury, created a Facebook page called 'Student volunteer base for earthquake clean-up'. Over the next few weeks, an estimated 2500 people came together and shovelled more than 65,000 tonnes of silt from Christchurch streets and residents' properties. Over the summer, the group formalised into a University of Canterbury Students' Association-affiliated club. Just two days into the new academic year, on February 22, 2011, Canterbury suffered another major earthquake event; this time, with 185 deaths, thousands of injuries and extensive damage to property and infrastructure [1]. The newly-named Student Volunteer Army (SVA) again swung into action and over the following three weeks engaged an estimated 13–15,000 volunteers who contributed more than 75,000 working hours. The student-led volunteers helped clear a total of 260,000 tonnes of silt, deliver 21,000 chemical toilets and distribute more than 500,000 leaflets, as well as engaging in numerous other community and team-initiated projects [2]; p. 8). Almost a decade after the earthquake mobilisations, the SVA has grown into a national volunteer mobilising charity, actively teaching volunteerism and project management in to primary schools, secondary schools and supporting students at tertiary level to mobilise volunteers across New Zealand.

The impressive speed and scale of the mobilisation of volunteers by the SVA earned the student-led group a thoroughly positive reputation. Picked up by the media looking to present a good news story in an otherwise bleak post-disaster context, the civic action was portrayed as uplifting and its student leaders as heroes, reflected in the numerous awards the movement's leaders received [3]. The rapid and highly effective use of online communication channels, and the large number of volunteers mobilised, has also meant the SVA has featured as a disaster relief success story in international disaster response forums and literature [4], and as a potential blueprint for youth-centred post-disaster civic action [5,6].

A common thread across these accounts has been a tendency to portray the student-led civic action as 'spontaneous' – albeit in slightly different ways. In local media reports, the mobilisation was framed as an unanticipated uprising among a cohort of students who were often considered as self-centred, anti-social or apathetic [3]. Within the international disaster response literature, the SVA has been used as an exemplar of an expected, although not inevitable, part of disaster or emergency response [4]. Although 'spontaneous' volunteers are at times considered a nuisance or liability by emergency and disaster management professionals, there has been growing recognition of the important

role of citizen involvement in disaster response and recovery (for discussion see Ref. [7–9]. With disasters expected to grow in intensity and frequency in a changing climate, there has been a growing interest in understanding how 'spontaneous' volunteerism might be managed, integrated or embraced within official disaster responses, given the particular capacity and capabilities of these citizens [10–13].

This paper makes two contributions to these debates about crisis volunteerism. First, this paper provides a framework for understanding the factors that helped enable the SVA to mobilise following the Canterbury earthquakes of 2010 and 2011. While several existing studies have sought to describe and account for the emergence of the SVA (for instance see Ref. [3,5,6,14,15], we seek to complement and extend these analyses by drawing on a new dataset of 54 in-depth interviews with student leaders, volunteers and key practitioners and community members that were involved or interacted with the SVA during the earthquake response. With interviews conducted nearly a decade after the earthquakes, these responses draw attention to aspects of the mobilisation that the actors involved considered important to the SVA's success. Second, in outlining these factors, many of which pre-date the emergence of the SVA, we argue that the 'spontaneous' mobilisation of volunteers is not necessarily as spontaneous as the term suggests. In this respect, our analysis furthers understanding of the diversity of crisis volunteerism [4,8,16], and has implications for disaster response practitioners, particularly in recognising the importance of networks of support which exist before and beyond disaster.

2. 'Spontaneous' volunteers in disasters

The 'spontaneous' responses of voluntary groups and individual citizens in the aftermath of crisis is a regular feature of disaster responses [17–20]. This citizen action is 'spontaneous' in the sense that the volunteers are not recruited or trained as part of an official response by government or non-government organisations, although they often end up working alongside one another. Many of these groups are informal with fluid membership and only last short periods of time, although some have continued and developed into formal organisations [8,9]. The citizens involved are often, although not always, based within or near to a disaster-affected community and can 'converge' on a disaster site [21], but also form part of a wider range of responses by different organisations and groups. This action can be as part of 'expanding' organisations (that have disaster response as a routine role, but increase capacity through mobilisation of volunteers), 'extending' organisations (that add disaster response activities to their existing functions), or as 'emergent' organisations (that do not exist prior to an event, and are new in both structure and tasks) [22]; for discussion see Refs. [4,9]. The activities of these crisis volunteers often include search and rescue, removing debris, transporting and distributing relief supplies, and providing food and drink to victims and emergency workers (for discussion see Ref. [8]; p. 446–7).

While a common occurrence, emergency and disaster management professionals have been slow to recognise and integrate this 'spontaneous' voluntary action into formal response planning. In most developed countries, disaster management largely relies on bureaucratic, command-and-control approaches that originate in the military roots of disaster management [4]. With no formal skills, training and experience, 'spontaneous' citizen action has tended to be considered a nuisance or liability; a risk to the efficiency and effectiveness of the response and an additional source of chaos with the potential to compromise health and safety [23]. In recent years this approach has loosened in recognition that this citizen action is an expected feature of disaster response, but framings persist that this citizen action can be counterproductive and therefore something to be managed or controlled [24]. For example, there are guidelines available to "optimise the management" of spontaneous volunteers [10–12,25,26].

Nevertheless, there has been a gradual shift towards acknowledging the distinct and important contribution that 'spontaneous' volunteers,

both as individuals and groups, can have within disaster response and recovery. Despite assumptions that disaster responses provoke panic-stricken, helpless, or anti-social behaviour, citizens have generally been found to work together to overcome disaster-induced challenges [20]. These emergent groups often appear if people see a need for urgent action that is not being taken by others, especially official organisations [8]. They are often proximate to the disaster, have 'on the ground' views of issues [27], can provide additional 'surge' capacity required in disasters or emergency that can be beyond the capacity of official agencies [4,28]. Unlike professional response or established organisations, these 'informal' groups are rarely constrained by pre-established rules, strategies, and technologies that may inhibit local response. Improvisation, innovation, and creativity can therefore be features of 'spontaneous' volunteerism [29], including among young people who may have particular knowledge, creativity, energy, enthusiasm and social networks [30,31]. Social media can also assist this volunteerism, for instance to enable organisation, sharing of knowledge and continued support for community members in the disaster recovery period [32,33]. In the longer term, citizen participation and engagement has also been found to be critical for disaster response and recovery [34,35].

The capacity and capabilities of 'spontaneous' volunteers have prompted arguments that they should not be suppressed, but rather used to supplement official disaster and emergency response. These calls provide what Twigg and Mosel [8]; p. 425) describe as an "implicit challenge" to the 'command and control' approaches embedded in most disaster management and emergency response agencies. They are also part of a 'participatory turn' in disaster management that includes questioning whether centralised approaches are appropriate to support whole-of-society recovery in the long-term [7]. In this context, there are increasing efforts to 'embrace' or 'embed' spontaneous volunteers in disaster response in ways that allow for volunteer independence or that 'co-produce' emergency and disaster management [13,29].

However, integrating this volunteerism in disaster response requires breaking down the uniformity implied within the category of 'spontaneous' volunteers. For example, Whittaker et al. [4] suggest that the term 'emergent' may be more appropriate than 'spontaneous', in recognition that this volunteerism may have roots that extend prior to a disaster. This can be in the form of 'extending' crisis volunteerism, in which existing groups and organisations extend their activities in times of crisis, but could also involve more informal processes among groups that enable deliberation, planning, and organisation (see also [9]. McLennan et al. [7] also situate evolving forms of crisis volunteerism within wider changes in the voluntary sector, including shifts from long-term, high-commitment volunteering and a rise in more spontaneous styles. However, despite a growing interest in citizens' inclusion in disaster response, Strand and Eklund [9]; p. 334) argue that "actual efforts to analyse emergent groups systematically […] are few and far between." In this context, this article seeks to build understanding of the development of a 'spontaneous' volunteer mobilisation, by exploring the contributing factors that enabled student-led action following disaster.

3. The study: the Student Volunteer Army response to the Canterbury earthquakes, 2010–2011

The Canterbury earthquake sequence that shook the South Island of Aotearoa New Zealand has had a profound impact on the region and the people within it. The first earthquake on September 4, 2010 was considered by many a lucky escape since it occurred 40 km outside the city and in the early hours of the morning, although there was significant damage to land, buildings and infrastructure. However, on February 22, 2011 an intense aftershock close to the Christchurch city centre during a weekday lunch hour resulted in loss of life and extensive damage to the city. In the immediate aftermath, there were utility outages throughout much of the city, significant liquefaction in the north and east of the city and the city centre was cordoned off, with approximately 80% of buildings within the central business district designated for demolition

[1]. Both earthquakes catalysed significant civic action by individuals, groups, and organisations, and this participation continued following major aftershocks on June 13, 2011 and December 23, 2011, as well as through an extended recovery process [14,36–38].

The SVA has been one of the most prominent and celebrated of these civic groups to emerge in the immediate aftermath of the disaster. Following its initial establishment after the September 2010 earthquake, the SVA engagement after each aftershock followed a general pattern: a call for volunteers was posted on Facebook, and teams were deployed to the hardest-hit lower-risk areas to assist with clean-up. The structure of the SVA was very fluid and organic, but during the February 2011 response a team of between 10 and 15 students came to informally comprise a 'core' decision-making group, with an additional 30–40 students providing a 'wider core' that undertook logistics, procurement of equipment and food for the volunteers, coordination and manning of call centres, and development and provision of IT infrastructure. These students helped assist thousands of volunteers who went to some of the most affected areas of the city, with many volunteers coming back multiple times over the subsequent three weeks to contribute to the clean-up. The work generally involved physical labour such as clearing liquefaction or distributing emergency supplies, but also assisting people, particularly the elderly and those in the most badly-affected suburbs. The energy and spirit of the volunteers, particularly in playing a crucial role in catering to residents' welfare and emotional needs, was captured in the media and became a 'grand narrative' of the earthquake response [3]; p. 768; [5]. Many of these accounts emphasised the leadership offered by Sam Johnson, the 'power' of social media, and a sense of surprise that this action would come from students [6].

In this paper, we explore in greater depth the factors that helped the SVA to mobilise in the period 2010–2011. We draw on 54 in-depth interviews conducted through February to June 2020, nearly a decade on from the earthquakes, as part of a wider study examining the long-term legacies of the student-led mobilisation. Interviews were undertaken with people connected with the SVA's 2010–11 earthquake response with the aim of developing a rich perspective of the movement over its ten years [39,40]. Particular attention was paid to approaching participants with a range of knowledge or experience of the movement [41], including across different time periods, both inside and external to the movement, in different roles within the SVA or external organisations, as well as those with significant or more casual involvement (Table 1). An initial pool of respondents was suggested by Johnson, following which a snowball sampling approach was adopted. Three possible participants declined to participate.

Participants were contacted via phone, email and LinkedIn following e-introductions. Interviews were one to 2 h long and were primarily via Zoom as a result of the Covid-19 lockdown, but where possible some were also conducted face-to-face. Participants were asked a range of questions about their memories of their involvement or interactions with the SVA, their perspectives on the conditions or circumstances that enabled the mobilisation, and their reflections on its legacies at a personal and collective level. All research procedures had ethics approval. In analysing this data, our intent was not to canvas all possible contributors to the mobilisation, but rather to focus on the factors that

Table 1
Summary of interview respondents.

Respondents	Number
Volunteers involved in 2010–2011 mobilisation, including those in the core team as well as those more peripherally engaged as labourers	19 respondents (4 female; 15 male)
Officials, professionals or community members that interacted with or supported the group	16 respondents (6 female; 10 male)
Journalists involved in reporting the SVA's earthquake response	3 respondents (1 female; 2 male)
Students involved with the SVA in the decade since its establishment	16 respondents (9 female; 7 male)

people involved in, or who interacted with, the SVA considered significant in enabling its success. All interview transcripts were uploaded into NVivo and the results were subsequently coded for descriptive, topic, and broad analytic insights. Subsequent rounds of coding provided more detailed and nuanced analysis of factors enabling mobilisation, and these codes were subsequently reviewed, synthesised and refined by the authors to develop interpretive convergence. Numbers have been randomly assigned to respondents to ensure their anonymity, however wherever possible we have provided background information to contextualise their response.

4. Enabling the Student Volunteer Army: insights from those involved

For many interviewees external to the movement, the SVA was considered remarkable for the speed and scale of its mobilisation. A lasting memory for one journalist, for instance, was the "the sheer number and how quick and easy it seemed to get them all together". Others noted the "spontaneity" of the movement or that "the escalation in a very short time was the thing that surprised me" (Respondent 22). An official said, "We stood back with our mouths open and watched how incredibly well they did" (Respondent 5). This civic action was considered all the more notable since it had come from a cohort of students that were not typically believed to be "community minded": "There was probably a perception that university students are a bit … lazy may not be the right word, but certainly difficult to organise" (Respondent 52). A member of the core team reflected that students "definitely weren't renowned for being […] contributing members of society".

Yet other interviewees, particularly those close to the 'core' of the movement, were quick to point to a number of factors that they considered critical to the movement's success, alongside "a bit of good luck". In fact, some participants explicitly cautioned that the mobilisation should *not* be seen as spontaneous. Respondent 14, for instance, argued that there was a risk that the movement was seen as "completely self-generated, out-of-nowhere, by four of five students", and that "the actual speed and scale up was not just a function of good intentions; it did require that pre-existing set of infrastructures and support networks." Other respondents also spoke about there being "huge contextual factors" that allowed for the "scale and publicity" of the SVA and its ability to "kick into action". In this section, we discuss seven factors raised by participants that underpinned the SVA's success – all of which are thoroughly interconnected and each critical to the SVA's success (see Fig. 1). For instance, one interviewee told us while reflecting on the multiple factors they had discussed that, "I don't know if you took one of them away, if it would be as successful as it was" (Respondent 7).

4.1. Student circumstances

While several interviewees emphasised that many of the people who volunteered with the SVA were from all walks of life and all ages, the core organisational team was largely comprised of University of Canterbury students, as were most of the volunteers providing the manual labour. As noted by 11 respondents, this university student cohort shared certain contextual circumstances which meant that they were, in many ways, less affected by the earthquakes than other people in Canterbury. This situation proved important in terms of their willingness, ability and capacity to mobilise following the earthquakes. As one former student leader summarised, "The earthquake hit the whole city, but it didn't hit it all equally" (Respondent 13).

Geography was identified as perhaps the most critical element in the 'unequal' impact of the earthquakes. Hardest hit were suburbs in the east and to the north of Christchurch city, where the violent shaking released liquefaction from the swampy land. Also severely damaged were the coastal hill suburbs. Particularly following the February earthquake, most of the people in these areas had no water, electricity or sewage, and many either opted to or were forced to leave their homes to
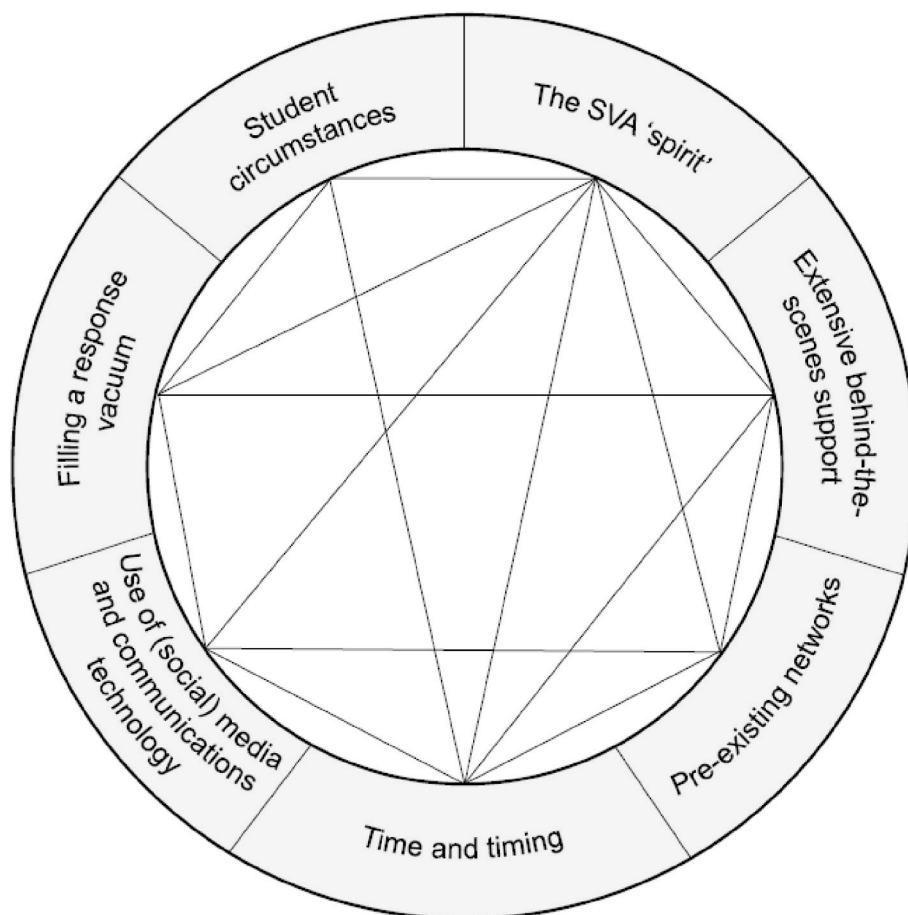
Fig. 1. Interconnected factors enabling the SVA mobilisation, as identified by those involved.

stay with family, friends or in emergency shelters while their homes were assessed for structural safety [1]. In contrast to this devastation, some areas of Christchurch remained relatively unaffected by the earthquakes – including much of the west of the city where the University of Canterbury is located and where most students resided. Several SVA core team interviewees remarked that most students were living "on a little island of solid ground", noting that the SVA's disaster response "would have been a very difficult thing to do if the campus had been on the east side of Christchurch and every one of our flats were full of liquefaction; then you're a displaced person yourself and you're not really in a position to help" (Respondent 13).

Another aspect supporting students' ability to mobilise was their stage in life. SVA core team interviewees highlighted a number of ways in which being university students had allowed them far greater flexibility to mobilise for disaster relief efforts than other members of society (8 respondents). Students had more time on their hands than many other residents as university was suspended after both major earthquakes, and few students had the scale of work commitments of non-student peers or older adults. With most university students in their late teens and early twenties, the students were also predominantly physically able and thus able to partake in the hard manual labour of shovelling silt. Many students had family outside of the city, having moved to Christchurch for their studies. Students also noted they had fewer responsibilities related to housing, as a cohort more likely to rent than own property, and many had independent mobility as a result of owning a car and having a driving licence. All these factors, pre-dating or independent of the earthquakes, made students a useful – and very impactful – source of post-disaster manpower. As one interviewee commented: "Like the army, you need the foot soldiers and the university provides a good source of foot soldiers" (Respondent 10). Although not mentioned by

participants, these students were also predominantly Pākehā (New Zealand European descent), which afforded a degree of inclusion in response efforts not experienced by Māori communities [42].

4.2. Filling a response vacuum

Participating in the SVA appealed to university students not only because they found themselves in a position to help, however, but also because they *wanted* to help. Some of the SVA core team interviewees downplayed this engagement: "Class had been cancelled so you had this how many thousand kids who were physically healthy and able, and bored and had nothing to do, wanting to do something" (Respondent 36). However, the idea that students cared about the disaster and wanted to help in their communities was frequently reiterated (11 respondents). Another core team member reflected that "if you're pointing [students] at something that's really meaningful and means that they can respond to something huge and be part of something bigger than themselves, it's a pretty easy sell". Similarly, Respondent 32 summarised that the SVA mobilisation indicated that students "fundamentally give a shit about things".

The SVA model of volunteering also enabled others to help in the post-earthquake clean-up. If and when people (anyone, not just students) wanted to help, they could look online for details of when and where to meet, then show up, register quickly and easily through the SVA's systems (e.g. the university students could scan their campus identity cards), get on a bus, be provided with food, and taken to work sites for the day. Enabling people to participate without complicated registration or training processes, or without requiring any commitment, meant the SVA could cater to volunteers who could legitimately claim to be 'spontaneous'. In contrast, it was noted that existing

volunteer organisations such as the Red Cross did not have capacity for informal volunteers, and in fact these established agencies began referring would-be volunteers to the SVA following the February earthquake. Thus, "the real advantage that we [the SVA] had over everyone else, and the thing that we could do, was provide an opportunity for people to help each other. And at that time, that was the most valuable thing that everyone was looking for" (Respondent 8). Another volunteer commented, "I was one of the lucky few who had a reason to get up and go to work contributing to the recovery" (Respondent 24).

The SVA also filled a vacuum in terms of the sort of response work they did. Because the core SVA team was keen to work with existing organisations such as Civil Defence to assist where they were needed, and because the SVA labourer volunteers were generally happy to do whatever was required, the group had no particular plan or expectation about what kind of work they would do. This flexibility ensured that the SVA was "free to go in any direction" and "develop organically or as required" to do what was most needed. So while Civil Defence was focused on the "serious stuff" of closing or opening roads and checking buildings, the SVA came to focus on shovelling silt when "it became apparent that was the main way we could add value" (Respondent 1). As one core team member noted, Civil Defence "couldn't clean up the silt on someone's driveway, garage or even in their backyard – they didn't have time for that – and the effect that that had on residents was pretty hard" (Respondent 7). This complementary approach was logical, both enabling heightened productivity in terms of response efforts but also ensuring the SVA did not "elbow aside" (Respondent 3) existing response agencies or cause ill-will. However, a few interviewees expressed some unease about the model looking back on it, particularly that the students' free and efficient labour may have "let someone off the hook" from bearing the responsibility and cost for clearing liquefaction; while the students' actions were "good because nobody else was coming to do it", they did not alleviate the fact that "nobody else was coming to do it" (Respondent 3).

4.3. Use of (social) media and communications technology

The role of Facebook in the SVA mobilisation has widely been discussed in both local media reports and research [5,6,15]. Many of our interviewees also emphasised its importance in promoting their work and call for volunteers. Facebook was considered ideal for the group: first, because information could be quickly and widely disseminated; second, because "it was free and didn't require any kind of infrastructure" (Respondent 1); and third, because the platform was already well utilised by prospective SVA volunteers. For these reasons, one of the core team attributed Facebook as being the single-most important factor in enabling the SVA: "If Facebook didn't exist, it wouldn't have happened. It's as straightforward as that" (Respondent 36). Many other interviewees also highlighted the importance the specific status and functionality of social media in 2010–2011 (11 respondents). One observation was that Facebook no longer allows users to invite friends to 'like' pages, as Johnson did with his September 2010 page. The omnipresence of social media today was also noted to create more competition for users' attention, which would make it harder to generate interest in a cause or event. Interviewees further remarked that there was a bigger generational gap in terms of use and understanding of social media in 2010/11 and fewer response agencies using that platform, which worked in the SVA's favour in terms of them becoming a major channel for recruitment of spontaneous volunteers. Such observations prompted respondents to wonder whether the SVA would have managed to operate as effectively if they were to mobilise in the current social media context.

It was not just through social media that the SVA attracted attention, however, but also through mainstream media. The SVA brought "immense media attention" (Respondent 7), partly as a result of the charisma of key SVA members, the compelling narrative of young people getting involved to help out community, but also as a counterpoint to the

tragedy of most reporting on the earthquakes. As one journalist interviewee noted, "There was a lot of coverage of the deaths and the destruction, which was very important – but you kind of want to, when you can, look for positives to share with the readers and the city's residents". This extensive positive media coverage was significant in raising the profile and popularity of the SVA, bringing with it widespread recognition of the group's efforts and the unpremeditated creation of the SVA 'brand'. It became, in the words of one interviewee, "the spirit of the response" (Respondent 13). In particular, the SVA's popularity formed what one participant described as "moral momentum" (Respondent 32), meaning the group "didn't have to do an appeal for volunteers, really; it was just saying, 'This is the time and place where the volunteers need to go to'" (Respondent 7).

The SVA did not just utilise media well; its team of highly competent IT students also created and maintained communications technology systems which were critical to its success. The SVA's first important communications innovation was put into place just a couple of days into the September 2010 response. Reacting to volunteers' disgruntlement with the inefficiency of the "write your name and address in this notebook" sign-up approach taken by Civil Defence, the SVA established a system to enable students to enter their data electronically rather than in writing, which was further developed for the February 2011 response. The SVA's other major communications development was a software that "wrapped around" an existing official mobile app to log and map the hundreds of help requests which were being received via phone, Facebook, Twitter, email and in-person drop-ins (for further discussion see Ref. [5]; p. 819). As one core team member remembered it, the IT team of approximately twenty people created a way to standardise this information by "asking for a bunch of details that then plotted on a map, and we were giving it a priority rating" (Respondent 32). Such systems lent the SVA efficiency, and catered to the needs of both their 'spontaneous' volunteer labourers and the people they were helping.

4.4. Time and timing

Critical to the SVA's success were several contextual factors related to time and timing. The immediate aftermath of both earthquakes brought a unique 'time out of time', when the status quo no longer applied and 'normal' rules were relaxed that enabled the SVA. As one member of the wider core team reflected, "If this [the SVA] had happened not during an earthquake and we were just trying to gather a bunch of students, there'd be months of paperwork, there'd be miles of hurdles … We probably wouldn't even end up being able to do it" (Respondent 15). The SVA's development was also supported by the particular timing of the disasters to which it responded; namely, the September 2010 earthquake from which the group was originally established triggered an extended earthquake sequence which included the major February aftershock (15 respondents). In this respect, the SVA responded to not just one disaster but a series of disasters, and the SVA was able to build on its previous experiences with each successive "repeat emergence" [3,43]. This was particularly true of the September 2010 mobilisation, described by some participants as a "practice run" for the group's highly successful response to the "gravity of loss and destruction" of the February 2011 event: "The first part of the SVA was remarkable and awesome, but the second part was insane to see" (Respondent 8).

Many aspects of the September 2010 mobilisation resulted in learnings which benefitted the February 2011 response. While not formalised, and retaining fluidity, the SVA had established a loose sense of organisational structure, roles, process, and direction following its initial emergence in the September earthquake, which was later able to be replicated and scaled up. Several interviewees external to the movement also commented the students involved had "gone up a notch" (Respondent 8) in terms of their confidence, knowledge, and competency in disaster response management. The SVA had developed tried-and-tested social media and communications systems which could be

easily revived and strengthened. In fact, one interviewee reflected that following the September 2010 response it seemed like that the communications team "had been waiting for the opportunity, been thinking about … 'if we did that again, this is how we could do it'" (Respondent 8). Further, through the September 2010 response the SVA had established important contacts and connections, especially with traditional disaster response authorities. In the words of one member of the core team, the SVA had become a "trusted service provider": "If we hadn't had that level of trust in the relationship with Civil Defence […] then there's no way that we would have been able to go into the places that we were going into and help in the ways that we were helping" (Respondent 32). The SVA had also developed extensive brand recognition with the media and wider community, which enabled their February response because "they had good credentials, they were known in the community to be reliable, so they were welcomed very much with an open arm" (Respondent 39).

The SVA's February 2011 mobilisation benefitted not only from the experiences of September 2010 but also from the group's 'formalisation' over the summer of 2010–11 into a university club. The students had not created any formal roles, but in preparation for recruiting club members at the start of the university year, by February 2011 the SVA had a name, logo, Facebook page and the printed green T-shirts which would become iconic during the earthquake response. The club had even planned a large-scale volunteering initiative for Friday (the earthquake occurred on the Tuesday), which meant they had partnerships and equipment "ready to go". One interviewee noted that all the behind-the-scenes preparation for the volunteering day meant the SVA could very quickly "kick into action" (Respondent 8).

4.5. Pre-existing networks

The social connectedness of the group's core members was widely identified by respondents as critical to the success of the SVA (15 respondents). This connectivity was important to the SVA from the outset, with Sam Johnson's September 2010 Facebook page generating interest and traction in large part because Johnson himself was well connected to different groups within and across the university and the city. Johnson's social networks were also crucial to sustaining the clean-up efforts beyond the initial interest generated by the social media post; friends offered to help coordinate the response – and this assistance was necessary because the overwhelming numbers of volunteers meant that the situation quickly "snowballed" (Respondent 13). It was not just Johnson's networks which enabled the SVA, though; with each additional team member, the group broadened its social connectivity and was thus able to recruit new supporters who could bring with them needed skillsets. These networks became ever-more important, especially throughout the February 2011 response when the SVA "kept growing so we needed to be able to scale up" (Respondent 6).

Most interviewees who mentioned social connectivity as a key enabler of the SVA made specific mention of the "very well established and well developed" club culture at the University of Canterbury (9 respondents). Many of the SVA's core members had been involved in other clubs prior to their engagement with the SVA, which was identified as bringing many benefits for the mobilisation. First, it provided students with certain skillsets such as managing volunteers, budgeting, and completing projects within a specified timeframe. Second, the club system itself had wider institutional and operational knowledge that the SVA was able to draw on. Respondent 10, for example, noted how the SVA "relied on the UCSA 'mothership,' if you like, for advice, places to store the gear, how can they best access students, how can students access them." Likewise, Respondent 14 reflected the SVA "emerged from a community of clubs that had access to reasonable resources to support exponential growth so it didn't just fall over when it got too big". Third, the club culture enabled students to be "really focused and active in creating their own future" (Respondent 26), which likely lent them a feeling of empowerment to undertake such a task as an earthquake

response. Further, students involved in these clubs held leadership positions within the university, and as such, members of the SVA "had recognition within their sphere of influence" (Respondent 55). These networks enabled these students to readily promote the volunteer effort widely and rally students to the cause. One of the core SVA team noted that:

If you're involved with a club on the organising committee for a year or two, you end up with quite a broad network just within that club; and if you're in a senior role, you end up connected up to all the other clubs. And you've actually got this really broad, powerful social and communications network and that's what was leveraged to create the Student Volunteer Army from the outset (Respondent 32).

These already well-established channels of communication among the "ecosystem of clubs" meant that the SVA was able to appeal to "a bunch of other executives who could rally their little group of 50–500 students" (Respondent 14) and recruit volunteers from across the university and with different specialisations.

4.6. Extensive behind-the-scenes support

Almost every student within the core team noted that a critical factor enabling the SVA was the huge amount of support it received from individuals, organisations, and businesses (24 respondents). One aspect was in-kind support and donations of time, money, equipment, food, and other resources. This contribution enabled the SVA to function: from the office spaces where the core team were based; to the lunch parcels and baked goods given out to volunteer labourers; to musicians who played concerts for the volunteers after a day shovelling silt; to the companies that donated mobile phones and call credit, sausages or wheelbarrows; to the local community groups who cooked barbeques for the volunteers – almost everything which the SVA needed to complete its operational work, as well as the actual manual labour, relied on donations.

In part, this support came about as a result of the social connections of the SVA – connections that existed well before the earthquakes. Especially as things scaled up massively in February 2011, "everyone [was] leaning on everyone else for the skills they had or the people they knew", such that SVA members sought assistance from many sources, including from people "high up" t (Respondent 6). The group also benefitted from support by virtue of its connection to the University of Canterbury, not least through the use of a large canvas marquee (nicknamed the 'Big Top') set up at the university following the February earthquake, which the SVA was able to use as a base. Yet the financial and material support given did not only come about because "someone knew someone" (Respondent 23); the SVA also benefitted from untold numbers of unsolicited donations, from individuals as well as companies. Support was also garnered through the efforts of team members whose specific role was to contact companies "asking them for free stuff" (Respondent 15). The fact that the SVA had become a recognisable name made this process easier than it might otherwise have been: "You just had to drop the 'We're the Student Volunteer Army' and they were like, 'Oh yes, I know who you are'" (Respondent 15). While not explicitly discussed by participants, it needs to be acknowledged that wider structural factors helped facilitate this support, including their students' ethnicity, education and wealth (by contrast see Ref. [42].

Besides donations, interviewees also spoke about the importance of 'enablers' – politicians, officials, professionals and local community members who helped the SVA access the people and places that they did. Some enablers advocated for and encouraged trust in the SVA. This support was noteworthy, for example, in facilitating early dealings between the SVA and authorities who had initially thought to "shut it down". Other enablers acted as intermediaries, connecting the SVA either into key services or into communities which initially were "very hesitant" with the students as "they were scared of who it might be and whether they were for real" (Respondent 53). Another group of enablers saw their role as shielding the SVA from bureaucracy by "sneak[ing] them through the back door" (Respondent 8) and "cut[ting] through the

red tape" (Respondent 10). Many enablers had only limited engagement with the SVA beyond this facilitation, often consciously withdrawing to allow the group to develop on its own.

4.7. The SVA 'spirit'

A widely discussed aspect of the SVA's success was the organisation's 'spirit' which encouraged deep-rooted support for the movement – among donors, media, and community observers, and especially among its volunteer labour base (26 respondents). Critical to this 'spirit' was the leadership demonstrated by the core team, which inspired the trust and energy necessary to undertake such large-scale clean-up efforts. Interviewees attributed this leadership in part to personal competencies (often citing other character traits such as charisma and organisational skills), and in part to individuals' prior involvement in university clubs which had allowed them to develop this aptitude but also the cohesiveness of the entire time. While core team members tended to allude to their leadership, people external to the group were more explicit in their acknowledgement; for example describing how "superb" or "impressed" they were, and their "huge admiration" for the student leaders. One official, for instance, reflected that it would be difficult to replicate a movement like the SVA, "simply because of the organisational skills that that group had" (Respondent 9).

Related to leadership was another important element to the SVA spirit: the hard work and dedication displayed by the core team. This commitment was commonly mentioned by interviewees (21 respondents), who noted that "people jumped; they did everything they could to help" (Respondent 15) and did "whatever it took [to] keep chugging through" (Respondent 6). Interviewees attributed this work ethic to the individual personalities of the core team as well as wider societal influencers such as the "Kiwi psyche" of resourcefulness, pitching in, and helping out. Some interviewees also highlighted the close urban-rural links within the SVA, including through the group's collaboration with the Farmy Army post-disaster response group, and that many of the SVA core team had grown up on farms with an associated "bolshy farming attitude of giving things a go and worrying about the consequences later" (Respondent 37).

The composition of the SVA was also central to its success. Being youth-led was identified as a "real catalyst" (Respondent 33) for the SVA, giving the group a point of difference and attracting volunteers, media attention, and donations. The organisational 'structure' was likewise critical. Despite Johnson being portrayed as a figurehead in media accounts, interviewees emphasised that no single individual "held a position of power" within the SVA. As such, the organisation was "led from the bottom and [was] decentralised, in a sense, in terms of the different efforts going on" (Respondent 52). This structure meant that:

Someone was in charge of the call centre, someone else was in charge of the gumboots, someone was in charge where we're going, someone else was in charge of how we're getting there. Everybody had their specialty and then they would very much have a discussion about, "Right, this is our goal for today, how are we going to accomplish that?" (Respondent 24).

This non-hierarchical style of operation was highly effective in terms of the SVA's disaster response management; the group as a collective was successful because each individual possessed the necessary leadership skills and was capable in their role.

Another element fundamental to the SVA spirit was the ambiance it created through its efforts to "make sure that everything was fun even though they [the volunteer labourers] were doing hard yakka" (Respondent 7). Creating this ambiance was important to the group's core team, who had realised during the September 2010 mobilisation that student volunteers appreciated being acknowledged for their efforts, enjoyed the social aspect of the response work and "would do a lot of work for food" (Respondent 13) – and that catering to these needs greatly encouraged volunteers to return. Thus SVA volunteer labourers were provided with snacks and lunch, and evening get-togethers with

live music were organised as part of the February response. The physical environs of the SVA headquarters in the large canvas marquee nicknamed the 'Big Top' were also transformed over the three weeks of the February response into an inviting space:

There was lots of food, there was always water, there was always help if you needed it, there was music, there was live music, there was couches to sit on and they just created this amazing culture. […] I actually wanted to be at the Student Volunteer Army. It created a feeling of hope and good and everyone was friendly" (Respondent 15).

In consciously fostering a positive 'vibe', the SVA enabled volunteers to temporarily escape the physical and emotional chaos and devastation of the post-disaster moment, and simultaneously connect with others through collective action.

5. Discussion and conclusion

The SVA's response to the 2010–2011 Canterbury earthquakes is, in many respects, an exemplar of the distinct and important contribution that 'spontaneous' volunteers can have within disaster response and recovery. It underscores the potential for youth- and especially student-led action to complement and augment official disaster responses [30], not only as a source of labour or resource [31], but more critically as a way to meaningfully support a desire to help following crisis [16]. Research highlights the importance of providing people with a sense of agency after the disempowering experience of disaster [4,20,35], and the SVA enabled people to actively participate in the city's response and recovery.

Yet in outlining factors that actors involved considered important in enabling the SVA mobilisation, it is also apparent that the SVA's civic action was not necessarily as 'spontaneous' as the term might suggest. There are some parts of the mobilisation that were genuinely 'spontaneous', including the impetus that encouraged Johnson to set up the September 2010 Facebook page, and the fact that throughout its response people could 'spontaneously' participate in the earthquake clean-up with no required skills or commitment. Yet the term is not applicable to the majority of factors that enabled the SVA and allowed for its rapid growth. These factors were either contingent on the particular timing and circumstances of the Canterbury earthquakes, emerged in their aftermath (for example, the existence of a 'response vacuum'), or existed prior. Particularly notable were the SVA's pre-existing networks, as core members were able to draw support from friends, colleagues and employers, and the university club structure (see also [15]. The capacity to draw on and expand these networks relied on wider structural factors, including education, ethnicity and wealth [42, 44]. So while the group may have initially been spontaneous, its capacity to rapidly 'scale up' was *not*.

What was also notable about the SVA's mobilisation was the embedded interconnections between the factors that helped enable its action. Many of the seven factors identified by interviewees as critical to the SVA's success have resonance in other disaster situations, including a desire to respond [20], the presence of diverse networks that can be activated [15], and the use of social media [45]. Yet as interviewees emphasised, it was not the presence of these factors *per se* but rather the coming together of them that was significant. Some openly doubted the potential of the SVA to be 'replicated' as a model of crisis volunteerism, given these interdependencies. Many of the factors were also specific to the Canterbury context, for instance the timing and geography of the events. Also noted was the particular combination organisational skills of the core team that came from the club culture within the university. So while aspects of the SVA mobilisation may be relevant to other situations, the combination of factors, and the interconnections between them, should not be underestimated.

In this light, our analysis suggests care in using the term 'spontaneous' to discuss crisis volunteerism. Strandh [16] has noted tendency towards binaries in analysing crisis volunteerism, which she argues overlooks its diversity. A similar critique could perhaps be extended to

the language of describing crisis volunteers as 'spontaneous'; while some actions can be genuinely spontaneous, the term can also downplay the importance of the contributions and connections that extend before and beyond a mobilisation. This tendency towards binaries has been noted within command and control approaches, which draws a clear distinction between prior normality and post-disaster chaos [4]. 'Spontaneous' volunteers in this context are framed as emerging only after disaster, with very little attention given to their prior lives and the social and institutional structures that support their mobilisation. Not only does this lend a perspective of volunteers as part of the ensuing chaos and as something to be managed or controlled, but it can also overlook the significant established connections and embedded knowledge and experience – and the interconnections between them – that help enable and inform manifestations of crisis volunteerism. What is particularly apparent in the case of the SVA is that framing the movement as 'spontaneous' mutes or over-simplifies the multiple interconnected factors that came together to enable the student action. In doing so, it overlooks the existing social networks and structures that made the mobilisation what it was, including the knowledge, connections and resourcing the volunteers relied upon.

In this respect, the case of the SVA adds support to analyses that have challenged the uniformity of crisis volunteerism and have sought to develop a more nuanced and embedded understanding of its expression [16,45]. Informal crisis volunteerism is often framed as occurring through 'emergent', 'extending' and 'expanding' organisations (for discussion see Ref. [4,9]. However, the SVA sits somewhat uncomfortably across these categories. It is 'emergent' in the sense that it did not exist prior to the first September earthquake, and it was not a product of deliberate disaster preparedness planning. By the February 2011 mobilisation, the SVA could be considered an 'extending' organisation as it built from existing disaster experience, although the core group was not well-trained and its function not pre-defined. And cutting across both earthquake responses, the SVA also had elements of an 'expanding' organisation, in the sense that parts of its internal operation came to be supported by a range of existing student clubs and organisations. As such, the case of the SVA is a reminder of the need for dynamic and flexible conceptualisations of crisis volunteerism; it can be both emergent *and* extending *and* expanding, and it can shift between those forms across time, just as an informal form of crisis volunteerism can become formalised or vice versa.

This study of the factors enabling a seemingly 'spontaneous' mobilisation therefore supports calls for more diverse and dynamic understandings of crisis volunteerism, particularly of more informal or emergent groups. It has previously been noted that there is a lack of research that examines these groups [16], and our analysis points to the value of empowering participants to describe and account for their involvement in a mobilisation on their own terms. In particular, the findings of this study suggests a rich line of inquiry may be to examine the factors that have enabled other cases of crisis volunteerism to help develop a more nuanced understanding of it as a phenomenon that does not simply start when disaster hits. While only one case, the SVA mobilisation would suggest that a network approach would be highly relevant for further research, as well as analysis that is cognisant of the interconnections between enabling factors. There are also further possibilities to examine the particular dynamics of forms of crisis volunteerism that are youth- or student-led [30], as part of situating this action within the changing landscape of volunteerism [7]. As such, we encourage scholars, practitioners and policymakers to explore the embedded and interconnected factors that enable other seemingly 'spontaneous' volunteers to mobilise following disaster.

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