

Building a resilient community through social network: ethical considerations about the 2011 Genoa floods

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ABSTRACT

This paper considers the role of social media in the response to the flooding of 2011 in Genoa (Italy), caused by flash floods during torrential rainfall. Volunteer students created a Facebook page to communicate with citizens and organize support and rescue activities. In this paper, we first look at the story of the 2011 Genoa floods from the point of view of the news media to gain insights into the imaginaries behind the use of social media in situations of natural disaster. Second, we look at a communication partnership between citizenry and public authorities for its value in building resilience to disaster among communities. Ethical and social dimensions of these partnerships are analysed.

Keywords

Social media, crisis, ethics of care, Genoa floods, resilience building framework, resilient community

INTRODUCTION

The 4th of November 2011, floods touched violently the City of Genoa (Italy) as a consequence of a strong precipitation that registered over 500 mm spikes in a few hours in different parts of Genoa and Province. The alert status was extended for several days. During and after the flooding, social media were used to respond to this emergency situation. More specifically, a volunteer group of students created a Facebook page “Gli Angeli col fango sulle Magliette” (“Angels with mud on T-shirts”) in order to communicate with citizens and organise support and rescue activities.

In this paper, we first look at the story of the 2011 Genoa floods through the eyes of the news media. Hence, we look at what the media coverage echoed and commented on at the time of the floods, in order to gain insights about their imaginaries behind the use of social media such as Facebook in situations of natural disaster. Imaginaries necessarily portray ethical values and we believe that the online news media are a good starting point to probe what issues emerge out there. Second, we analyse some articles published on the Facebook page “Gli Angeli col fango sulle Magliette” using Dufty’s (2012) resilience building framework. Our objectives are twofold: on one hand, we wish to deepen our understanding of social media’s potentials in crisis situations and above all the current expectations about these types of media to perform in crisis situations, as portrayed by the news media. In other words, whether the types of function that up until recently were tacitly expected from traditional institutions (including relevant agencies but also the media), are now being shifted to bottom up initiatives and hence, whether there are grounds to consider that there is abrogation of responsibility from the part of the institutions, or if on the other hand spontaneous partnerships like the one in Genoa are to be cherished and nurtured. Therefore, we will discuss the function and value of what we call “do it yourself crisis management” in building resilience in society by empowering citizens and communities and we suggest that we need better understanding of the implications of public authorities embracing bottom-up initiatives such as this. By investigating this, we inevitably need to discuss the pros and cons of the volunteering citizens’ use of social media in crisis situations such as natural disasters, looking into the ethical and social dimensions raised by the

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traditional news media.

The paper is structured as followed: the first section reviews relevant literature for our analysis. The second section is dedicated to the methodology of data collection. The third section presents results and their analysis which are discussed in section four.

SOCIAL MEDIA IN CRISIS SITUATIONS

Citizens' micro-blogging activities for emergency or crisis management

An integrated approach to disasters for any type of disasters (natural, man-made or conflict-related) should cover the full disaster cycle i.e. the prevention, preparedness, response and recovery stages (European Commission, 2008). During the phases of response and recovery, citizens are more likely to use personal and collaborative media to mobilize their resources and exploit their pre-existing social networks to develop situational awareness about the crisis situation they are or have been witnessing (Farnham *et al.* 2006; Liu *et al.*, 2008). In the literature, “micro-blogging” activities refers to qualifying citizens’ use of social media when reporting on activities “on the ground” during disasters, crisis or emergency situations. Micro-blogging covers activities such as collecting and distributing information, communicating and answering help request (e.g. Palen & Vieweg, 2008; Reuter *et al.* 2011; Terpstra, 2012; Tapia *et al.*, 2013). Due to its growing ubiquity, communication exchange rapidity, cross-platform accessibility, micro-blogging is increasingly being considered as a means for emergency communications, in addition because it is also seen as a place for ‘harvesting’ information during a crisis event to determine what is happening ‘on the ground’ (e.g. Palen *et al.*, 2010; Vieweg *et al.*, 2010). For example, the social networking service Facebook offers actual opportunities for crisis communication given the large number of users who ubiquitously connect through various mobile devices facilitating ‘collective intelligence’ (Reuter *et al.*, 2011; Reuter *et al.* 2013) and having the potential to build disaster-resilience communities by supporting the creation of a ‘community of practice’ (Dufty, 2011).

Building a community resilience through social media

Community resilience is defined as ‘entails the on-going and developing capacity of the community to account for its vulnerabilities and develop capabilities that aid that community in (1) preventing, withstanding, and mitigating the stress of a health incident; (2) recovering in a way that restores the community to a state of self-sufficiency and at least the same level of health and social functioning after a health incident; and (3) using knowledge from a past response to strengthen the community’s ability to withstand the next health incident’ (Chandra *et al.* 2011: p. 9) and community disaster resilience as ‘the ability of a community to not only resist and recover from a disaster, but also to improve as a result of the changed realities that the disaster may cause’ (Dufty, 2011, p. 35). Dufty (2012) sustains that ‘disaster risk reduction’, ‘emergency management’ and ‘community involvement’ are the three disaster resilience-building pillars, which differ across communities as their development depends on the importance attributed to each within each community.

In case of crisis situations, there is a need for collaboration and for establishing reliable patterns between heterogeneous social actors such as, police, fire-fighters, infrastructure operators, public administration and (affected) citizens to improve the ability of a community to prepare for, respond to, and recover from disasters, namely the “collaborative resilience” (see e.g. Board on Earth Sciences and Resources, 2011; Goldstein, 2011; Reuter *et al.*, 2013). Among the citizens, volunteers, i.e. “private citizens who work together in pursuit of collective goals relevant to actual or potential disasters but whose organization has not yet become institutionalized” (Stalling & Quarantelli, 1985), are often the first to take care of victims, conduct search etc. in need of constant updating. In this context, social media constitute infrastructure for virtual collaboration, helping out those that Reuter *et al.* (2013) called “virtual volunteers”, i.e. those who, through social media, can be located anywhere and can help “real volunteers” (those who are on-site and fight locally against the effects of a crisis or emergency. Hence, by fostering communication and cooperation between real and virtual volunteers social media improve “collaborative resilience”.

Ethical and social dimensions of social media in crisis situations

In the literature in the field, data quality is presented as one of strongest barriers when using citizen-generated content through social media in crisis management. (see e.g. Tapia, *et al.*, 2013; Grant, *et al.*, 2013; Moore *et al.*, 2013). Indeed, issues of reliability, quantification of performance, deception, focus of attention, and effective translation of reported observations/inferences arise when crisis managers start engaging their organisational mechanisms to respond to the crisis.

Other recurrent ethical issues that emerge in the literature have to do with ‘social justice’. As discussed by Watson & Finn (2013) about the use of social media during the 2010 Eyjafjallajökull volcano eruptions, such use can also lead to information asymmetry and inequality with the risk that those on the ‘dark’ side of the

digital divide may be left behind, giving rise to issues of social justice and responsibility. Rizza et al. (2013) analysed the 2011 Vancouver Riots, where during and after the events the Vancouver Police Department asked citizens to send media that they collected during the riots in order to help identifying rioters; the authors suggested that in this case, enrolling citizens in crisis response led to institutional unpreparedness to deal with the spontaneous and unintended ‘do-it-yourself’ justice and ‘do-it-yourself’ society the call from the police has given rise to, the whole strongly supported by social media that were used to prompt people to act.

Here we introduce briefly the notion of care as an ethical issue and what in the literature is referred to as ‘ethics of care’ (Gilligan, 1977; 1985) that we argue is most relevant for the Genoa case. Ethics of care is part of the normative branch of ethics, but its focus is not on “what is just” but on “how to respond” (Gilligan, *op. cit.*). It addresses the virtues associated with care as a moral sentiment and response in the context of a particular relationship. It stresses the interdependence of persons and the importance of particular relationships. Even if it appears more appropriate to intimate relations (such as familial ones), ethics of care can be extended to communities (NEEP & EAIC, 2012). Indeed we would argue that this concept is at the basis of what moves a community together to act upon crisis situations²; that is, on the care relationships that move communities to act collaboratively in a crisis situation, contribute to their resilience and their actual formation or strengthening. In here we suggest that a ‘crisis situation’ constitute in its own right a space of care that not only includes the space and time in which it occurs but also all relevant social actors, comprising citizens. Whilst technology has been seen as supportive of stable and durable societies (Strum & Latour, 1999), it is also seen as configuring and reconfiguring institutionalized community spaces, in particular spaces of care (Schillmeier & Domènech, 2010). For this paper, in particular technology challenges the re-arrangements of relations between private and public forms of care and the generation of new relations and subjectivities of care receivers and care givers, as well as ethical issues arising from effects on accountability (Schillmeier & Domènech, *op. cit.*). We would argue that emerging notions trust through the technology need to be addressed.

METHODOLOGY

During and following the Genoa flood social media were used to respond to this emergency situation. More specifically, a young Genovese citizen created a Facebook page on the first day of the disaster. Quickly this Facebook page has become a node of communications between local authorities, agencies, and citizens.

The data collection about social networks’ uses and ethical issues during and after the 2011 Genoa floods relies on the three following stages: 1) An exploratory research on Internet using Italian and English key words to identify online media stories about social media’s use during the floods in Genoa. This search contributed to identify the ways in which social media were used during and after the floods, including the Facebook Page ‘Angeli col fango sulle magliette’; 2) A specific research on the Italian media news Internet webpage of the newspaper *La Repubblica* (Nov. 2011 – Nov 2013) in order to identify the news media stories about the Facebook page ‘Angeli col Fango sulle magliette’; 3) Analysis of the Facebook page using Dufty’s (2012) disaster-resilience building framework.

RESULTS AND ANALYSIS

Exploratory research: identification of online media stories about social media’s use during the flood

We identified six on-line articles (news media, blogs, forecast website) published between 4/11/2011 and 01/02/2012. Based on these news social media were used during the floods: (1) to replace telephone communications, which had collapsed, thanks to the free Wi-Fi network infrastructure supplied by the city; (2) as a means for local authorities and emergency agencies to communicate with citizens publishing relevant information (i.e. forecast alerts, warning messages about risky areas in the city); (3) as a means for local authorities and emergency agencies to receive information from citizens on the ground - bartenders or victims; (4) by young citizens who used Facebook to support, organize and coordinate crisis response; and (5) provided material (pictures, video) in real time to report the floods.

Specific research on the newspaper *La Repubblica* website: the news media story about the Facebook page ‘Angeli col Fango sulle magliette’

We found six articles telling the history and the story of the Facebook page ‘Angeli col fango sulle magliette’. The Facebook page was created by a young Genovese after the publication by the newspaper *La Repubblica* of the story of what happened in 1970 after the Genoa floods i.e. the solidarity and civility of young people to help

² N.B. Here we are not addressing ethics of care in a medical sense.

and rebuild the city. The articles insist on these two aspects of cooperation among the Genovese citizenry:

- A 17-year-old young person explains that 40 years ago, her father was cleaning the city and that when she told him she was planning to go and help, he took her in his arms very proudly; two 14-year-olds found out about the meeting point to clean an area of the city on Facebook but they had to convince their parents to go and help (in *La Repubblica*, 07/11/2011).
- Comments from the old generation of *angels* were posted to encourage and thank these new young *angels*; Nabil, a twenty-year-old Moroccan man explains that he arrived when he was 10 and considers Genoa as his city, hence he helped with cleaning and rebuilding (in *La Repubblica*, 05/11/2011).
- The Italian President received the young persons who created the Facebook page ‘Angeli col fango sulle magliette’ and congratulated them for their civility and solidarity (in *La Repubblica*, 12/02/2012).

Social media and disaster resilience community: what ‘Angeli col fango sulle magliette’ tell us

We analysed the content of the 18 articles posted on the Facebook page ‘Angeli col fango sulle magliette’ using Dufty’s (2012) resilience building pillars to determine how the Facebook page has been used to support these pillars of disaster prevention and release and we see that it supported and responded to the three constitutive fields of community disaster resilience-building. 17 of the articles support the ‘community development’ pillar; seven inform the ‘disaster reduction’ pillar, whereas 14 articles support the ‘emergency management’ pillar.

DISCUSSION AND CONCLUSION

In this paper we suggest that the events during and after the 2011 Genoa floods are an illustration of how social media allowed citizens to answer competently to a situation of crisis, hence supporting community disaster-resilience building. In Genoa, social networks constituted a virtual space of care for citizens to exercise their citizenship, care and solidarity by organising rescue activities, reconstructions, etc. through such a space. Even if the Facebook page ‘Angeli col fango sulle magliette’ was first a private initiative of a well-intentioned Genovese citizen, the community, comprising the local authorities formally in charge of tackling such situations appropriated it. Hence, through the virtual space both local authorities and citizens became empowered actors to address the crisis situation, even if they were from the onset legitimate social actors. But the endorsement of a citizen initiative by the public authorities has further reinforced the authority of such activity. A trustful relationship has developed amongst all, a *sine qua non* condition for respected cooperation, shared understanding of preparedness and of what is needed for building community resilience. All this, we suggest, was strongly mediated by the technology: online and offline social networks that implement each other.

In here we tap into the ethics of what we understand as a reconfiguration of the spaces of care and solidarity in Genoa. The reconfiguration in this case can be described as follows: (1) re-arrangements of the relationships between private and public forms of care: the Facebook page became the communication node between local authorities, emergency and crisis agencies and citizens, facilitating the coordination of on-line and off-line activities; (2) the hybridisation of new relations and subjectivities of care receivers and care givers through this virtual space of communication and management, i.e. the Facebook page facilitated this dual role of each social actor and; (3) the ethical implications of changes in care delivery due to the mediation of information technologies.

We see the spontaneous use of social networks by young citizens and successive endorsement of this initiative by the public authorities, as responding to deep notions of care, trust and empowerment on complex situations where there are high stakes and decisions need to be made with urgency under different types of uncertainty. And whilst we suggest here that these types of partnership are not just welcome, but rather necessary to ensure the quality of response and ultimately community resilience to disaster and crisis, we see that ethical and societal issues need to be looked at, namely:

- (1) With regard to ethics of care: ‘how to respond’ responsibly and in respect of values and human rights need attention when new relational forms and subjectivities emerge among care givers and care takers;
- (2) With regard to trust and empowerment: trust is a basal aspect that needs to be nurtured in crisis and emergency situations; a communication model like the one in Genoa implies sharing of responsibility and consequently empowering citizenry to a number of functions usually attributed to authorities, namely ensuring quality of communications and action. The Genoa case could have been a case for ‘do it yourself crisis management’; instead the partnership created, as described by the media, makes the story one of ‘community based’ collaborative response. Hence, we would argue that what could be seen as abrogation of responsibility, is actually an opening up of the space for better coordination of societal resources to tame situations of crisis and emergency.

Finally, though issues of social justice may still arise if the channels of communication among citizenry and the public authorities remain confined to digital means, we see however data quality as a lesser issue than when voluntary sources are called upon by authorities with no clear public responsibility from the volunteers side. But in Genoa, the spontaneous communication partnership of a citizen initiative and the public authorities, the opportunity for sharing responsibility and ensuring fitness for purpose has been created. Clearly, there should be now institutional and societal mechanisms to assess further the public value of these shared actions.

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