A #cultural_change is needed. Social media use in emergency communication by Italian local level institutions

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ABSTRACT

We discuss the results of a research project aimed at exploring the use of social media in emergency communication by officers operating at a local level. We performed 16 semi-structured interviews with national level expert informants, and with officers operating at the municipality and province (prefectures) level in an Italian region (respondents were selected based on their involvement in emergency communication and/or emergency management processes). Social media usage appears distributed over a *continuum of engagement*, ranging from very basic usage to using social media by adopting a *broadcasting* approach, to deeper engagement, which also includes continuous interaction with citizens. Two main attitudes emerge both in the narrative style and in social media representations: some respondents seem to adopt an *institutional* attitude, while others adopt a *practical-professional* attitude. Among the main barriers to a broader adoption of social media, *cultural* considerations seem to prevail, along with the lack of personnel, a general concern toward social media communication reliability, and the perceived distance between the formal role of institutions and the informal nature of social media communication.

Keywords

Social media, local level, emergency communication, barriers

INTRODUCTION AND BACKGROUND

Social media have proven to be effective communication tools both during and in the aftermath of natural disasters, offering timely information both to emergency managers and affected populations, providing situational awareness and supporting emergency recovery processes. In order to better understand social media emergency communication processes, scholars have analyzed several case studies, focusing on different contexts and social media platforms, and considering both *top-down* and *bottom-up* processes. From a *top-down* perspective, scholars have analyzed institutional communication and emergency management processes (Hughes, St. Denis, Palen and Anderson, 2014; Giacobe and Soule, 2014), and have considered the role of media organizations (Mularidharan et al., 2011). From a *bottom-up* perspective, scholars have studied the ways in which affected populations engage in social media-enabled self-organizing communication processes in the aftermath of disasters (Starbird & Palen, 2011; White, Palen & Anderson, 2014). Research has also focused on the interactions between organizations and different kinds of publics producing and consuming information during crises (Hughes and Tapia, 2015), underlining that "[s]ystematic knowledge is needed on the relative importance of different kinds of sources" (Sommerfeldt, 2016, p. 19), when relying on social media as a part of the relief effort process. In such a context, scholars have underlined the need to overcome "the 'us against them' mentality that exists between some emergency managers and journalists" (Liu, Fraustino & Jin, 2015, p. 60) or other social media creators.

Institutions need to find their way to become influential on social media in order to be able to spread their message to a large and relevant audience. Hughes et al. (2014), for instance, analyze social media usage in formal emergency management, underlining several challenges for broader social media adoption, which

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include changes in its role and responsibility, concerns with liability, deluge of data, trustworthiness of citizen-generated data, reliability of social media networks, and information overload. On the other hand, *bottom-up* communication could provide institutions with meaningful information from the affected populations, following the *Voluntweeters* model proposed by Starbird and Palen (2011), to the idea of recruiting "social media savvy" users, and involve them in emergency response processes on a local basis (Cooper et al., 2015), or to consider the role of *humans as sensors* (Earle et al., 2010; Cooper et al., 2015).

Social media adoption by institutions, both to spread and to gather information, appears uneven in different national contexts, and even when comparing different regions within a single country. After several natural disaster situations that hit Italy in recent years, for instance, citizens complained about the lack, or inadequacy, of institutional communication on social media, showing, at the same time, great interest in finding reliable and verified information (Comunello et al., 2016). Different case studies have highlighted that during heavy floods or earthquakes, Italian institutions were not generally among the most influential Twitter accounts, as this is a function more likely exerted by citizens, (Twit)stars, or media outlet accounts (Comunello, 2014; Comunello et al., 2016). On the other hand, relevant differences are to be found, in the Italian context, at a local and regional level. When considering the use of standardized hashtags for weather warnings on Twitter, for instance, citizens were the main drivers of its adoption and "curation" (leading to its usage to mainly spread verified information, focusing on situational awareness) during the November 2013 Sardinia floods (Parisi, Comunello, Amico, 2014); in the case of the January 2014 Toscana weather warnings, on the other hand, institutions supported the use of the predefined hashtag, achieving a similar goal, and reaching an influential role in Twitter conversations (Grasso and Crisci, 2016).

In more general terms, Internet and social media communication by Italian public institutions is still uneven. Research highlights a few best practices, along with several cases in which the potential of digital communication still remains unexploited. Data from the National Statistics Institution show, for instance, that only 29% of Italian Internet users access public institutions' websites (ISTAT, 2015), while the *fans of* 10 Facebook pages managed by Italian municipalities agree that these pages are "far from fulfilling their fans' expectations" (Lovari and Parisi, 2015, p. 209). Digital communication by Italian public institutions in general is described as far from a participatory practice (Faccioli, 2016), being oriented towards *broadcasting* rather than interactive models (Lovari and Parisi, 2015). Furthermore, no explicit reference to social media communication is to be found in job descriptions for public servants; those with the role of social media managers generally do so on a voluntary basis, receiving only informal support from their department.

In this paper, we focus on social media emergency communication by Italian public institutions at a local level. We decided to focus on the local level for several reasons. First, the Italian civil protection system is strongly grounded at the local (municipality) level. The mayor is the first civil protection authority, and he or she is in charge of deciding whether to request intervention from higher level institutions (up to the national level, when the Civil Protection Department is involved). Moreover, according to communication officers of the Civil Protection Department, this is also the reason why the department has never established any social media account, relying on the local level for social media communication with citizens. Second, when asked about the preferred sources for getting emergency information, Italian citizens prioritized the local level, also underlining the role of the mayor (Lombardi, 2005, pp. 94-99). Third, this research is inspired by the work by Hiltz, Kushma, Plotnick and Tapia (namely, Hiltz, Kushma and Plotnick, 2014; Plotnick, Hiltz, Kushma and Tapia, 2015), who focused on local level emergency managers in the US (at a county level). More specifically, the authors highlighted the main barriers for social media usage to spread and gather information: lack of staff (quantity), lack of formal social media policies, lack of staff (skills), and low reliance on the trustworthiness of user-generated content. As a result, the authors underline that local level agencies in the US "are not yet ready to embrace SM and use it to its fullest potential" (Plotnick et al., p. 10).

We decided to conduct a similar study in the Italian context, with the goal of exploring social media usage, social media perception, and the barriers to a broader social media adoption by public institution emergency managers at a local level, involving officers operating in municipalities and prefectures.

METHODS AND RESEARCH QUESTIONS

Considering the complexity of the Italian civil protection system, and the peculiarities of digital and social media communication by Italian public institutions, as well as following the example of the aforementioned scholars, we decided to perform an exploratory study, relying on qualitative research methods. More specifically, we first performed semi-structured interviews with four experts working as communication officers at the Department of Civil Protection, in order to get a comprehensive picture of the Italian civil protection system, and of the related communication processes.

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Subsequently, we decided to focus on a single Italian region[1], which was chosen based on information provided by the expert informants, because it is at the national average with regard to social media emergency communication (neither *best practices* nor *laggards* were selected at this step). Additionally, the expert informants helped us select two social media managers working for Italian municipalities (outside the selected region) whose social media emergency communication practices are considered *best practices* at a national level.

With regard to the selected region, we decided to focus both on municipalities and provinces. While provinces are currently being eliminated from the Italian institutional system, prefectures (the institutions that represent the government at the province level) are responsible for emergency management at the province level (they are directly in charge of any emergency that is too big to be managed at the municipal level). More specifically, we decided to write a formal letter to every mayor of province capital municipality[2] in the selected region, and to every prefect of the same region, asking for a delegate for a face-to-face interview. Delegates could be involved at any level in emergency management and/or communication. Council members and vice-prefects in charge of civil protection as well as (digital) communication officers were designated[3]. Overall, we conducted 16 semi-structured interviews, which lasted between 30 and 60 minutes.

Our research questions were the following:

1. What social media platforms are used, and for what purposes, by local level emergency managers? What are the prevailing usage patterns?

2. How are these platforms perceived by managers and operators?

3. What are the main barriers to broader social media adoption for spreading or gathering emergency-related information?

4. What *desiderata* are expressed by managers and operators with regard to platform features or organizational issues?

The interview outline starts by addressing the civil protection system and the coordination between the different institutions involved. Such questions are aimed both at a better understanding of the system itself, and at understanding the particular ways in which each respondent understands it. We then focused on emergency communication, asking them to recall and describe a specific situation where they had been directly involved. At this step, we avoided directly mentioning social media, encouraging respondents to freely mention every relevant channel they relied on. We subsequently focused on the role of social media in gathering and sharing emergency-related information, considering motivations, usage practices, perceived advantages and disadvantages, and perceived barriers. Finally, we focused on the respondents' wishes with regard to platform features or to organizational aspects. We adopted a flexible interview style, asking for examples and further information when relevant.

Interviews were voice-recorded and transcribed, and underwent thematic analysis (Boyatzis, 1998; Braun and Clarcke, 2006). More specifically, interview transcriptions were analyzed in order to generate initial codes. The coding process was conducted jointly by the two researchers, who largely discussed excerpts whose coding appeared problematic or ambiguous. Codes were collated into potential themes; themes were reviewed and a thematic map was generated, which included themes and subthemes. According to Boyatzis, "a theme is a pattern found in the information that at the minimum describes and organizes possible observations or at the maximum interprets aspects of the phenomenon" (1998, p. vii). In our research, both kinds of themes emerged. More specifically, themes describing and organizing observations are: communication practices (subthemes: internal communication, external communication), social media perception (subthemes: positive perceptions, negative perceptions), barriers to social media usage (subthemes: material barriers, immaterial/cultural barriers). Two additional themes contribute to interpreting the phenomenon. On the one hand, some of the respondents'

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[1] To protect respondents' privacy, we decided not to disclose which specific region we focused on. Moreover, we will not provide detailed information about respondents' job descriptions or sociodemographic data. Interview excerpts will be attributed by using the following labels: "Mun", to refer to respondents working at a municipality; "Pref", to refer to respondents working at a Prefecture; "CP", to refer to respondents working at the civil protection department. Respondents belonged to Prefectures (6), Municipalities (6), Civil Protection Department (4).

[2] Province capital municipalities in the selected region include very large cities and medium-small sized cities.

[3] One administration never answered our request, while two other administrations answered without providing any delegate to be interviewed. Three administrations involved more than one respondent. The remaining administrations involved one respondent. As we formally asked to the Mayor and the Prefect, we interviewed all the delegates, without performing any other selection among them, when more than one respondent was involved.

answers appear as mainly oriented toward an *institutional* attitude; in this case, references to the law and to the formal role of institutions are repeated throughout the interview, and their tone of voice seems more formal, including several juridical terms. On the other hand, other respondents had a more *practical-professional* attitude; in this case, the overall expressive style seemed less formal, and their language included several technical terms referring to digital communication and social media management, while their overall representation of emergency communication processes was less bound to formalized roles, and more to achieving practical goals[4].

RESULTS AND DISCUSSION

This section is organized as follows: we first focus on communication practices, considering internal and external communication, and information spreading and gathering. Afterwards, we focus on their perception of social media platforms. We then focus on the main barriers to broader social media adoption, as perceived by the respondents. Finally, we explore the wishes expressed by respondents, considering both social media platform features and organizational issues. When analyzing the perception of social media platforms and the barriers to broader social media adoption, the discussion is organized around the two aforementioned attitudes.

Communication practices and social media usage patterns

When considering communication practices, a multifaceted picture emerges: different institutions rely on different communication strategies as well as on different channels. As no shared guidelines are to be found, channel selection is generally an individual choice, often dependent both on operator skills and attitudes, and on contextual considerations. More specifically, almost all of the respondents reported using the institutional website, while a majority of them mentioned Facebook and Twitter. Other platforms, such as WhatsApp, Instagram, and certified email, were mentioned by less than half of the respondents.

Internal communication

When considering internal communication, many respondents mentioned face-to-face encounters, as well as *traditional* systems, such as faxes and SMS. When mentioning such systems, many of the respondents referred to them as "old fashioned" systems, showing some regret about their use; some of them, however, underlined the issues experienced when trying to introduce "newer" communication systems.

When it comes to coordination, respondents underlined the need to integrate formal—albeit *traditional*— communication systems (such as mailing lists and phone calls) with informal ones, which are perceived as more advanced (e.g. WhatsApp groups involving colleagues working for different departments). It is noteworthy that experimenting with tools and practices that are perceived as innovative is generally related to an informal, unofficial domain, while formal procedures are depicted as bureaucratic and not time-effective. On the other hand, respondents also underlined the legal responsibilities that are related to their actions, thus recalling the role of certified email as the only tool that is able to provide them with legal protection.

Communicating with citizens: information-spreading

Consistent with literature on digital communication by Italian public institutions (Faccioli, 2016), digital media are generally used following a *broadcasting* logic (sharing information with the public), while less attention is paid to gathering information from the public.

Several respondents explained that their institutions mainly rely on traditional channels to provide information to the general public. They mentioned brochures and leaflets, as well as the local press, describing such tools as the most effective means to reach their goals, given contextual considerations and citizen characteristics (several respondents, for instance, emphasized the older age of a significant proportion of the inhabitants in their territory).

When considering digital platforms as tools for information-sharing, the most commonly used is the institutional website, followed by Facebook. In this regard, some institutions manage a Facebook page, while others still rely on a personal profile (referring to the municipality or to the prefecture as if they were individuals); in some municipalities, moreover, a central role, even in emergency communication, is played by the mayor's or the

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[4] Out of 16 respondents, 8 appear as mainly oriented toward an *institutional* attitude; 7 appear as mainly oriented toward a *practical-professional* attitude; 1 shows traits of both attitudes.

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council member's personal profile on Facebook, creating an overlap between political and institutional communication, as already described in the literature on Italian institutional communication (Faccioli, 2016).

Respondents operating in administrations that were designed as *best practices*, on the other hand, are able to overcome some of the issues mentioned by other administrations. For instance, despite the large proportion of an older population, one respondent recalls having reached (*organic reach*) around 50% of people living in his municipality during a recent emergency. In this case, the use of Facebook as an institutional communication channel, emphasizing its role in emergencies, was promoted through traditional media (paper brochures were distributed to each home). Another municipality, for instance, uses codified Twitter hashtags for a variety of different emergencies. In other contexts, informal communication systems are used to overcome the limitations of formal procedures, as is the case of WhatsApp groups aimed at reaching "influential mothers" in order to rapidly communicate that a prefect closed schools the following morning due to severe weather conditions.

Communicating with citizens: information-gathering

Information-gathering mainly occurs through dedicated emergency telephone numbers, which are mentioned by most of the respondents. In smaller towns, face-to-face contact also seems relevant: "They stop you when you are walking down the street, or they come to your home […] Being the mayor of a small town, there is no filter, you face confrontation every day" (Mun.).

Some respondents also mentioned gathering information through dedicated sections of the institutional website, email, or Facebook messages. Digital media are generally mentioned as tools for information-gathering with regard to minor emergencies, while for major emergencies, traditional channels are more relevant, with the sole exception of the two cases identified as *social media best practices*. In general terms, respondents' attitudes towards information gathered through social media is ambivalent; most of the respondents defined citizen-generated information as non-trustworthy, while others also underlined that emergency telephone numbers are managed by trained professionals who follow specific procedures in order to verify information and identify the caller. A minority of respondents, on the other hand, underlined the relevance of information gathered through social media:

> [Referring to a specific emergency that occurred some months earlier] many people provided us with information through social networks, mainly Facebook; we received several warnings about streets that were closed, electrical power that was down, trees that fell down, information we wouldn't have received otherwise, because we were experiencing communication issues, and we were not able to reach the affected areas. (Mun.)

Some of them also referred to specific practices and procedures, often established on an informal basis, that contribute to verifying information.

> We encourage citizens to use social [media], instead of calling the contact center…. During emergencies, we constantly monitor [the predefined hashtag], so that we can also detect people not using it in a proper way, in order to gather information that is of course subsequently verified. I wouldn't say that we don't trust citizen-generated information, but we need to verify it in order to prioritize. (Mun.)

Overall, the respondents' words highlight what could be defined as a *spectrum of engagement* with digital media, ranging from basic use of the institutional website (which also corresponds with legal requirements for Italian public institutions) to a *broadcast*-oriented attitude toward social media platforms to a more interactive usage, including information-gathering through social media.

Social media perception

Social media representations and perception are multifaceted. On the one hand, respondents following what we define as an *institutional* style seem to negatively emphasize the distance between what they perceive as the interactive and horizontal nature of social media platforms and the formal role of institutions; they perceive it as highly hierarchical, and often refer to citizens in patronizing terms. On the other hand, respondents adopting a *practical-professional* narrative style underline the positive role of social media, highlighting the strategies adopted in order to avoid the potential dangers of *hoaxes* and misinformation.

Among the users adopting a *practical-professional* attitude, the perceived advantages of social media seem to prevail over perceived disadvantages. Among such advantages, respondents mentioned time-effectiveness, defined as crucial in emergency contexts; others referred to a general "need to be up-to-date," or to the need to devote more attention to interaction with citizens, which is perceived as necessary in order to overcome the self-referentiality that has historically affected Italian public institutions.

> I believe this is also a better way of working for us, because public administrations are that. They are communication, if there is no communication with citizens, public administrations are just self-referential. (Pref.)

The perceived disadvantages of social media are related to three main areas, and prevail among respondents adopting an *institutional* attitude. More specifically, while some disadvantages are mentioned by both categories of respondents, those adopting an *institutional* attitude seem to merely address them as an issue; those adopting a *practical-professional* attitude, on the other hand, while recognizing such (potential) drawbacks, refer to specific strategies or tactics that allow to overcome such issues.

First, some respondents described a distance between what they perceive as the interactive, informal, and non-ruled nature of social media, and the formal role played by institutions. The need to follow official communication procedures is mainly underlined by representatives of prefectures, while local level politicians (mainly municipal council members) seem more oriented toward engaging in informal and interactive communication processes.

A second, relevant issue as perceived by the respondents is related to the potential spread of disinformation and misinformation; *hoaxes* were mentioned by several respondents.

> We can't forget that the prefect is responsible for law and order. Therefore, misinformation… and hoaxes like "in half an hour an earthquake will occur" may severely hinder public security. Just consider the chance that people believing such news will leave their homes…. Or crowds can be formed, occupying the streets…; the prefect is responsible for law and order, solely responsible for law and order, primarily responsible for law and order…. The prefect needs to manage correct, honest, verified information…because misinformation could also cause law and order problems. (Pref.)

This excerpt is in accordance with what Rodriguez, Quarantelli and Dynes (2007) defined as a *command and control* approach toward emergency management, which considers the affected population in patronizing terms. While misinformation and hoaxes are mentioned by most of the respondents, those who adhere to a *practical-professional* narrative style seem to consider them from a different perspective, highlighting the strategies adopted to deal with them, having established specific verification procedures (asking for pictures, asking for further information, engaging in a constant dialogue with citizens, carefully checking user profiles, etc.).

A third issue is the perception that social media have recently turned into an arena for *hate speech*. According to several respondents, citizens seem to indulge in verbal aggression towards government institutions and public figures, making demands, which often cannot be fulfilled, in emergency situations. Consequently, some respondents seem to have changed their previously positive attitude toward social media interaction, often calling for increased social media literacy and overall etiquette.

> Earlier on, I believed that chatting on social media was extremely important in order to understand citizen behavior.… But I can tell you that… there are growing demands, which are often polemical…; there's always someone telling you what you are supposed to do, and how. (CP.)

While underlining similar phenomena, respondents adopting a *practical-professional* attitude highlight that when engaging in a constant dialogue with citizens, such drawbacks can be overcome.

> Earlier on, people showed a cooperative attitude. Now, Facebook is really widespread, and people are more aggressive, or complaining. Well, when they notice that you interact, you provide them with answers… sometimes, they even say "well, I knew that I needed to turn to Facebook… to get an answer" …. But in the end, they say, "but I was speaking in general terms, I'm really thankful to the staff that manages this page, because…." (Mun.)

Overall, the two attitudes seem to play a role in framing users' concerns about what they define as the disadvantages of social media. For instance, *hate speech* is considered an issue by both categories of respondents: on the one hand, respondents adopting an *institutional* attitude mainly motivate their concerns highlighting that *hate speech* defames institutions; on the other hand, respondents adopting a *practical-professional* attitude are mainly concerned by the fact that *hate speech* might break shared communication etiquettes, and also underline the ways in which such issues can be overcome.

Barriers to social media usage

According to the respondents, the barriers to a broader social media adoption for spreading or gathering emergency-related information are multifaceted. Even if the interview outline explicitly referred to emergency situations, some of the respondents provided answers that apply to social media usage in more general terms.

Barriers that exist in peaceful times are likely to become even bigger in case of an emergency.

Organizational issues, as well as the lack of personnel (quantity and quality), are mentioned by most of the respondents when they focus both on peaceful times and on emergencies. The lack of resources is addressed as a general issue affecting Italian public institutions, while answers vary in the accuracy of their description. For instance, respondents adopting an *institutional* attitude tend to mention a generic lack of resources, while those adopting a *practical-professional* attitude provide more specific analyses. They mention issues in interacting with other offices in the same administration who follow more traditional practices. For instance, a social media manager underlines that "the other offices answer me by sending a PDF document" (Mun.). Some others highlight the lack of social media skills and expertise among public servants, calling for specific educational processes, or for hiring dedicated professionals. Technical resources, or the lack thereof, on the other hand, are not addressed as a relevant barrier, other than a single mention about the lack of broadband connectivity.

In general terms, several respondents refer to *cultural dimensions,* underlining that most administrative procedures are far from the speed and interactivity supported by social media. Moreover, among the barriers, some respondents refer to citizens, underlining their *cultural gaps*, or their old age. The relation between "non-use" (or "basic use") and "barriers" does not appear to be linear; do barriers determine non-use (or basic use)? Or are the issues experienced in social media usage justified by respondents through the reference to perceived barriers? Indeed, respondents who underline citizen' inadequacies are generally those who use social media only at basic levels, and who adopt an *institutional* attitude, while those who are more actively engaged with social media seem to be familiar with several strategies to overcome such barriers. Such dynamics seem to apply to other kind of barriers as well.

Another relevant barrier, for instance, is related to the lack of legislation regarding the ways that public institutions use social media. While the respondents who adopt an *institutional* attitude seem to consider the lack of regulation as a sufficient reason for not broadly using social media in emergency communication, waiting for "governmental authorization." Those who adopt a *practical-professional* attitude mention some regulatory issues, without considering them enough to limit their usage. The latter, for instance, address more specific regulatory issues, including the prohibition to rely on (paid) social media advertising, or the lack of a formal recognition of the professional role of the social media manager. Indeed, institutional social media communication is generally the result of individual initiative, while only one respondent's job description explicitly mentions his role as a "social media manager."

Furthermore, another main barrier, which is mainly emphasized by those respondents who adopt an *institutional* attitude, is related to the abovementioned distance between the traditional role of institutions, and the perceived interactive and informal nature of social media. On the one hand, some respondents underline social media communication's ephemeral nature, which has no legal validity, while administrations normally produce legally-binding acts.

> We are a public institution, we cannot produce legally-binding acts through social media. They help to rapidly reach our public, but we still need to follow more formal channels. Our activity is based on formal acts, even during emergencies. (Pref.)

Other respondents underline the difference between the unidirectional communication style adopted by administrations, and the interactive style, which is widespread on social media.

> I believe that institutional information, Facebook and Twitter, for instance, should be spread through an official channel, it should not allow the user to comment, in my opinion, because it is an official channel. [My personal profile] is a different channel, it's personal, and therefore people are allowed to comment, but the official channel, in my opinion, should be different; it should provide information to the public. "Tomorrow XY street is closed. Period." Why would someone wish to reply to something like that? […] You don't need to comment on everything. (Mun.)

Some respondents, moreover, mention the fact that most social media platforms are proprietary, and do not show any collaborative attitude towards (Italian) institutions, but are completely focused on their commercial business.

Even if only a few of the respondents broadly adopt social media in order to gather emergency-related information, additional, specific barriers are mentioned in this regard by all of the respondents. The main barrier is related to the perceived low-trustworthiness of citizen-generated information. As already discussed, this seems to be the reason for avoiding gathering information through social media; some administrations do not use social media for this task, while other administrations have adopted specific procedures to overcome this barrier. Other respondents also mention organizational issues; even when gathering citizen-generated information, the lack of cooperation between different offices represents a major barrier for effectively

employing such information in emergency management processes.

In general terms, while respondents adopting an *institutional* attitude seem to mainly underline the inadequacies of social media (that do not 'fit' the official role of institutions), those who adopt a *practical-professional* attitude stress institutions' inadequacies (underlining the organizational or legislative barriers that limit a broader social media usage).

Respondents' *desiderata*

Most of the respondents do not seem to have clear opinions about platform features or organizational issues in order to achieve more effective social media usage in emergency communication. Respondents' desiderata, albeit being mostly generic, can be divided into two main categories: organization-related, and platform-related. With regard to organizational aspects, several respondents refer to the wish to enhance dedicated human resources, and a broader collaboration between different offices belonging to the same institution. Some of the respondents, furthermore, refer to the need for a cultural change inside institutions. One of the respondents, moreover, wishes to have the chance to rely on (paid) social media advertising, a practice that is currently prohibited.

Only a few of the respondents expressed platform-specific *desiderata*, mentioning the following: enhancing geolocalization services, enhancing conversation-monitoring tools, and obtaining a "certified account" on social media platforms (which appears to be an issue for several Italian institutions). A respondent also mentioned the wish to introduce *social sensing* applications based on social media conversations, while another would like the general adoption of a codified hashtag for emergencies.

LIMITATIONS, FURTHER RESEARCH DIRECTIONS AND CONCLUSION

This paper explored the use of social media in emergency communication by Italian officers operating at a local level, focusing on social media usage patterns, social media perceptions and the barriers to broader social media adoption.

In our opinion, the main limitation of this research is that we performed a limited number of interviews (16) and that the main focus was devoted to a single region, which can be considered as the national average with regard to social media emergency communication. Nevertheless, considering the complex nature of the Italian civil protection system, as well as the fact that literature on this specific topic, analyzing the Italian context, is missing, we are convinced that exploring motivations, perceptions and representations constitutes a relevant step for a deeper understanding of the phenomenon. This research, moreover, represents the first step of a broader research project; we are currently involved in a quantitative study targeting officers operating at a local level in the whole country. In building the survey designed for the latter project, we strongly rely on the results of this qualitative research.

In designing the research project discussed in the previous pages, we were inspired by the work by Hiltz, Kushma and Plotnick (2014), and Plotnick, Hiltz, Kushma and Tapia (2015). These authors highlighted the main barriers to social media usage experienced by local level emergency managers operating in the US: lack of staff (quantity); lack of formal social media policies; lack of staff (skills); and low reliance on the trustworthiness of user-generated content.

Our research highlighted two main attitudes in respondents' answers, with regard both to the narrative style and social media representations. Some respondents seem to adopt an *institutional* attitude, while others adopt a *practical–professional* attitude. Such attitudes seem to be related to the ways in which respondents understand and use social media and will be further explored in the following steps of the research.

Our analysis highlighted a multifaceted picture with regard to social media usage both in institutional communication, in broader terms, and in emergency communication. Most of the institutions seem to rely mainly on traditional communication tools and practices, and social media usage is still uneven. When considering the few cases described in terms of *social media best practices,* experimentation with advanced forms of social media emergency communication seems to rely on individual activism, rather than on well-established policies. Among the main barriers to a broader adoption of social media for emergency communication, organizational issues, as well as a lack of resources, are mentioned by most of the respondents,

along with concerns regarding social media communication reliability. In broader terms, *cultural* considerations seem to prevail; several respondents underline the perceived distance between the traditional role of institutions, and the interactive and informal nature of social media, while some also highlight that institutions need to produce legally-binding acts, which should not be questioned by citizens.

In this regard, Sutton et al. (2013) observed that citizens generally turn to social media to fill the information gap when institutions adopt a traditional *command and control* approach (Rodriguez et al., 2007), limiting the amount of information shared with citizens. Respondents seem aware that social media can enable organizational change, as well as a change in the relations with citizens, which could increasingly emphasize citizens' roles as *active survivors* (Rodriguez et al., 2007).

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