Effectiveness of social media in Risk Communication

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Abstract

The safety of lives and property at minimum costs is essential across all human endeavours, and this is the goal of governments and individuals. Environmental risks such as hydrological hazards (e.g. flooding) on the other hand threaten the safety of lives and property most times at monumental costs to those affected irrespective of their status. The effective communication of environmental risks however mediates between these two because it triggers action that juxtaposes findings from risk research with the social and political will required to achieve safety of lives and property.

Documentary analysis was used to assess the effectiveness of New (social) Media comparative to traditional media in the communication of risks with particular reference to natural or man-made hazards.

Social (New) media as an emergent communication technology platform has many other beneficial attributes for risk communication. However, concerns bordering on credibility and data integrity, it is not solely a reliable and effective tool or channel for communicating climate risks. However, the benefits of social media for information sharing before, during and after risk events notwithstanding, I argue based on the rationalist-instrumental model of communication, that meeting the ethics demand, data integrity and governance protocol of risk communication is critical and are non-negotiable imperatives. Hence, they (social media channels) do not serve effectively for the communication of risks.

1.0 Introduction

The safety of lives and property at minimum costs is essential across all endeavours, and this is the goal of governments and individuals. Environmental risks on the other hand threaten the safety of lives and property most times at monumental costs to those affected irrespective of their status. The effective communication of environmental risks however mediates between these two because it triggers action that juxtaposes findings from risk research with the social and political will required to achieve safety of lives and property (Meissner et al., 2002; Waugh Jr. and Streib, 2006). Risks and the increasing frequency and severity of natural and human-induced disasters place them at the centre of debates and research on human-environment relations and issues of development and sustainability. At the interface of society, technology, environment and the systems that sustain them lie risk. Wisner et al. (2004), and Oliver-Smith (1996), posit that risk and human vulnerability to disasters are indications of the inadequacy of the required interventions to enable successful adaptation to certain features of their natural, technologically and socially constructed environment in an appropriately sustainable fashion. Communication of risk is at the heart of these interventions, and social media technologies (e.g. Twitter, Facebook, Google+, MySpace, Instagram, LinkedIn, FB-Instant Messenger) has been deployed to communicate risk in certain spheres which to some extent has some beneficial effects but not very effective in all cases.

This essay examines the extent to which social media can be used to effectively communicate climate risks. It describes briefly the concepts of climate risk, risk communication, and what social media is and its benefits; but argues, based on the rationalist-instrumental model of communication (Weingart et al., 2000), that social media as an emergent communication technology platform has many other beneficial attributes for communication but is not a solely reliable and effective tool for communicating climate risk.

2.0 Climate risks

Empirical evidence suggest climate risks "in a general setting as risks induced by climate change" (Charpentier, 2008; and Charpentier and Maux, 2014). Health issues arising due to climate change and which spur new diseases (or the resurgence of diseases that were supposed to have disappeared, e.g., dengue fever, malaria, cholera in North America); and the impact of climate change on agriculture and energy are examples.

3.0 Risk Communication

The Committee on Risk Perception and Communication of the National Research Council ("NRC") offers a useful definition of risk communication in their study, "Improving Risk Communication" (NRC, 1989): "Risk communication is an interactive process of exchange of information and opinion among individuals, groups, and institutions. It involves multiple messages about the nature of risk and other messages, not strictly about risk, that express concerns, opinions, or reactions to risk messages or to legal and institutional arrangements for risk management" (Battistol, 2015).

4.0 Social Media

Social media as virtual arenas where users create content by writing, designing, broadcasting and giving feedback to information generated through ubiquitous computing which merges the physical and virtual. It brings computing off the desk into public spaces through wearable and handheld computer-enabled devices (Luoma-Aho 2012; Cope and Kalantzis, 2010). Its emergence may be connected to traditional communication and public relations theories as its relevance brings out what communication is in essence: interaction and sharing of information (Shan et al., 2014 and Luoma-Aho 2012), which are collectively constructed by and for its users. Practically, a conglomeration of web-based technologies and services is the catchall phrase which describe the functions of social media. They enable information sharing across all human endeavour including their associated risks and risk experiences. Although they vary dramatically in their purposes and approaches, most of the social media tools have become universal and travers spatial, temporal and cultural boundaries making them uniquely adaptable. This is because they share an emphasis on enabling users to communicate, interact, edit, and share content in a social environment. (Porter, 2008 and Tepper, 2003). Their application and their functionality is also flexible since their users cut across demographic and social classifications (Bertot et al., 2012). These functionality and flexibility increase their relevance for the communication of information about natural or human-induced risks. Since risks or hazards are associated with events of disaster, crisis or emergencies, their potential for effective communication of necessary information before, during and after such events is assessed in the following paragraphs.

5.0 Communication of Climate risk using Social Media

Weingart et al., states that in the rationalist-instrumental model of communication,

> "scientific research helps to discover an environmental problem; it identifies options for the problem's potential solution; scientists inform politicians of these findings; and, as political decision making can always be expected to suffer from some inertia or be distorted by interests that run counter to environmental concerns, scientists can also try to create public awareness to foment political pressure"., (2000).

While this is a strong model showing basically, that information flows among three spheres (science, politics, public) the technological platform through which information flows is critical as the fourth sphere. Emphasis on 'science' in the model applies only to the research element. However, analysis of the 'technological platform' for communicating the research finding to politicians and public is critical to ensure that, ideally, the content of the information passed remains unchanged and automatically initiate both social and political action following, the rational logic of the information obtained.

Climate risk communication through social media platform raises notions of ethics, credibility, authority, entertainment, newness and legitimacy, given that the character of its communication in each of the spheres differ, and that the uncertainties of the risk are to some extent exacerbated in the cause of information sharing across the spheres. The affect resulting from this resides in the perception domain where risk is perceived based on feeling rather than logic, reason, and scientific deliberation to bear on risk management (Slovic et al., 2005).

Deployment of social media technology in communication raises ethical concerns in communication theory. Most of the tools in this platform permits the unregulated sharing of texts and graphics which have little respect for ethics, human dignity and respect of human rights. This realm of the use of social media raises concomitant concerns around privacy, consent and confidentiality especially affecting content and traffic generation. Climate risk related decision making for individuals, groups and institutions through social media communication important for human health and safety for instance suffer drawbacks based on these concerns.

6.0 Risk contexts and the effectiveness of social media for communication

The body of evidence by Pidgeon and Fischhoff (2011) agrees that social media is an improvement in communication technology. They contest that although guidelines for climate risk communication exists, there is little empirical evidence of their efficacy, whether for explaining the science or to challenge people to act sustainably in order to mitigate potential risks.

For a successful resolution of health, security, environmental and safety-related hazards, effective risk communication is critical. This is because risk situations in these cases tend to obstruct effective communication and result in tensed emotions like helplessness, fear, distrust, outrage, frustration and sometimes violence that results to loss of lives and property in worst cases. (Covello et al., 2001; Covello, 1998; and Fischhoff, 1995). Isolated and uncoordinated communication processes deployed through traditional and familiar or popular social media in high-concern situations and crises often alter the rules of communication thereby make information sharing and assimilation processes fall short of expected standards and render the situation worse (Covello et al., 1989; and National Research Council, 1989; and Slovic, 1987; Slovic et al., 2004; and Slovic et al., 2004).

People living with risks potentially or actually experience different degrees of either natural or human-induced disasters resulting in loss of lives and or property, a situation Britton (1988) and Fritz (1961), describe as "maximum community disruption and dislocation". Batistolli mentions that:

> "risk communication research has added detail and nuance to our view of risk communication process, taking into consideration elements that are often quantifiable and measurable, including the the actual level of risk and its significance to the message recipient" (2015).

Depending on the context in which people live, their perception, evaluation and response to risk across regions, over time and across social strata vary as well (Kasperson et., 1992; Leschine, 2001; Renn and Levine, 1991).

Using the criteria listed afore, communication of risk using social media is influenced by the following factors:

(1) The source and authority of information (who- individual, institution)

(2) The information communicated (what- type, nature)

(3) The accessibility of the information depending on time and location affects effective communication of risk.

(4) The relevance of information (why, for who and how)

(5) The level of engagement of stakeholders in the communication process

7.0 Traditional media and Social (New) media in Climate Risk communication: Issues and Concerns

Traditional media (electronic (television, radio) and print media) as a means of communicating climate risk may be limited in spatial coverage and versatility of use. The regulated nature of these media has the advantage to ensure that communication of risk is accurate, can be collectively archived and retrieved when needed. It is however limited in coverage and can be afforded and maintained by a privileged few unlike devices that use social media.

Using social media to communicate risk makes the severity and characteristics of risks to be subjective for some reasons. First, the interactive capabilities of social media individualizes the generation and sharing of online contents thereby subjecting the type and nature of information exchanged with and by people living with risks to be opinionated. Second, the individualized access of Social media enables people to establish connections and links, share their views about a risk situation and freely express their opinions about the level of risk and their vulnerabilities to it (Simon et al., 2015). However, since information affects their perceptions and evaluation of the risk as well as influences their description of it; and their response to either accept- that the risk is a potential threat to life and property or ignore existing risk.

8.0 Conclusion:

I have described social (new) media and its benefits briefly in this essay but argued that social media as an emergent communication technology platform although has many beneficial attributes but less so for risk communication. The essay also shared concerns that it is not a solely reliable and effective tool for communicating climate risk for ethical and data integrity reasons. I also mentioned that based on the critical concerns on timeliness before, during and after risks events leading to disasters, the ethics, politics and governance of communication of risk, that the benefits of social media notwithstanding, it is not effective for the communication of risk. I advanced

however that, an integration of traditional media and other medium of sharing science-based research will make for robust and effective communication of climate risk in order to mitigate the potential threat to lives and property. This is because such integration enhances the effectiveness of risk communication through integration and linkage of information; fast data access, enhanced availability of communication and reduction in redundancy of links; fast data access, timeliness and updating of information and standardization of climate risk information.

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