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## Preface

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The early onset of winter in Buffalo, USA, in November 2014 caused chaotic situations and cost the lives of several people when the strongest snowfall in 40 years occurred. Torrential rain, called *bombe d'acqua* ('water bombs'), throughout Italy and in parts of Switzerland over weeks led to devastating floods and mudslides. More than 6,633 Italian municipalities and more than six million people were threatened by this weather disaster (Ulrich, 2014). The haemorrhagic fever Ebola, has been a health disaster for months on the Western Coast of Africa, and no one needs to be clairvoyant to know that Ebola will keep global crisis managers busy for the months to come. More than 200 mineworkers died in an explosion, probably caused by electrical power failure, in Turkey in May 2014. News and media reporting over serious crises and disasters has become business as usual.

Whether disasters are of natural origin or man-made, they always have serious consequences for the affected people and for the involved crisis management. People behave and cope with disasters differently. Each time a disaster occurs, it leaves its specific imprint in collective and individual risk perception. The way people cope with a particular disaster is always an expression of previous imprints. In addition, risk and crisis perception is deeply influenced by the trust people invest in the disaster management capabilities of the responsible civil protection agencies and disaster relief organisations: Are these organisations and agencies perceived by the concerned public as well-prepared for a crisis, are they organised in an expedient and meaningful way, is their information policy adequate and practical? These and several other factors influence the way risks and ongoing crises are perceived, and it determines the way people respond to a crisis and whom they identify as responsible for the disaster, its origin, its mitigation and the actual course a crisis takes. Risk perception, coping strategies and actual behaviour in crisis are deeply influenced by socio-cultural factors. How people react to sudden disasters is less individual and distinct within a given cultural group than it might appear. Instead, cultural patterns shape risk and crisis perception and the response thereof.

Since Douglas and Wildavsky's (1982) seminal work on risk and culture, risk has been considered to be a cultural or social construct in the social sciences and humanities. According to this approach, risk perception, identification and management are connected and filtered by the specific cultures and social structures of the various actors in society. Douglas and Wildavsky emphasised that cultural factors, such as common norms, values and beliefs, are crucial to understanding different perceptions of risks. By now, many studies indicate the same for the perception of natural and man-made disasters and the success of crisis communication (see for example, Martin et al., 2009; Gaillard and Texier, 2010; Gierlach et al., 2010). Culture in that regard is considered to be a "common

way that a community of persons makes sense of the world...a set of plans, instructions, and rules" [Gross and Rayner, (1985), pp.1 and 3].

Central to the functioning of crisis management is the corresponding communication. Crisis communication in this respect means the transmission of information directed at managing a situation immediately before or during an extreme natural or industrial phenomenon that challenges the functioning of significant parts of communities, regions or a whole country. This holds true for internal crisis communication among the disaster management authorities and action forces, on the one hand, and for external crisis communication directed at the public, often transmitted by mass media, on the other hand. Communication aimed at building public trust in crisis management authorities or raising general awareness of risks falls under the category of risk communication. We have identified elsewhere (Dressel and Pfeil, 2014), three general rules for alerting and crisis communication that play a role within each risk cultural context:

- 1 the choice of the alerting tool should correlate with the age of the recipients
- 2 the alert message should correlate with the area of residence
- 3 the choice of the alert sender should correlate with the respective 'national trust context'.

Crisis and risk communication has to take into account the respective risk culture in order to be adequate and effective.

This special issue will bring to the forefront of discussion different perspectives that show the influence of culture on risk perception, on actual social behaviour and coping strategies behaviour in case of a natural and/or man-made disaster and its implications for crisis communication. It is intended for academics, practitioners, social scientists and risk and crisis managers who are involved in the areas of risk and crisis communication, as well as risk and crisis management on the governmental and business level concerned with natural and man-made disasters.

This special issue therefore is opened by Kare Harald Drager, president of the International Emergency Management Society (TIEMS), an international operating organisation that provides a forum for all of those involved in disaster and emergency management, policy, certification, education and training. In his opening, Drager asks us to focus on and to take into account cultural differences. Harald Drager was a member of the advisory board of the EU-funded project 'Opti-Alert, Enhancing the efficiency of alerting systems through personalised, culturally sensitive multi-channel communication' (<http://www.opti-alert.eu>).

The Opti-Alert project actually was the starting point for this special issue. One work package within this project was devoted to the study of socio-cultural factors of risk perception and crisis communication in seven European countries. The more advanced our sociological analysis of the empirical material, based on in-depth interviews with experts of crisis management and communication, biographical interviews with survivors of major disasters and focus group research in different regional settings, became, the more obvious it was to us that some cultures are closer to each other than others. We looked in more detail for similarities and differences between the seven examined countries and were able, as a classical unintended theoretical side-effect of this project, to identify three ideal-types of risk cultures.

The first article of this special issue is written by me, as I was leading the social scientific work package mentioned above. My contribution to 'Risk culture and crisis communication' starts with a theoretical examination of the term 'risk culture' in the social scientific discourse followed by a risk culture typology that we have developed within Opti-Alert: individual-oriented risk culture, state-oriented risk culture and fatalistic risk culture, and the consequences for crisis communication and management triggered by the different risk cultures.

The next article of this issue takes this matter into account and gives an example of a fatalistic risk culture. Alessio Cornia, Assistant Professor at the Department of Political Science at the University of Perugia, applies the risk culture framework in his paper 'In search of an Italian risk culture: prevalent approaches towards disasters among experts, survivors and people at risk of natural and industrial hazards'. In juxtaposing, the experts' view on the functioning of the crisis management system and their ideas about the specific Italian peculiarities with citizens' framing of disasters, Cornia is able to show that the predominant approach to risk and disasters that "emerged from the field research conducted in Italy is characterised by fatalism, strong dependence on public institutions, low trust in authorities, little confidence in self-reliant strategies and poor risk awareness".

An excellent introduction to the field and the distinction between risk communication and crisis communication is given by Sweta Chakraborty's paper on 'Advances in risk and crisis communication'. The author, Senior Fellow at the Institute on Science for Global Policy (ISGP) and Assistant Professor at Columbia University, covers a broad range of material on the topic. Her article uses the example of the pharmaceutical industry to show the "importance of designing and testing of risk communications prior to the occurrence of an actual crisis". Chakraborty concludes her contribution by stating that "future challenges in emergency risk communication will have their own unique circumstances, but a common thread is better pre-crisis planning involving the understanding of public perceptions of risk to deal with communication challenges that will inevitably arise."

Critical incidence stress management (CISM) is an efficient instrument developed in 1983 for pre-crisis planning in order to stabilise those at the forefront of crisis and disaster management, e.g. firefighters, paramedics or police officers. How CISM could beneficially be applied to air traffic control staff is examined by Alice Mueller-Leonhardt, Pernille Stroebaek and Joachim Vogt in their contribution 'Dealing collectively with critical incident stress reactions in high risk work environments: a case study on a European air navigation services provider'. They broaden the view from risk culture to safety culture and demonstrate in their article that safety culture could be enhanced through the application of CISM. In addition, the interrelationship between trust, interaction, communication and coping strategies within high risk organisations is explored.

This special issue and its articles have the aim to stimulate the discussion and debate about the role of culture for risk and crisis governance, with a particular focus on the communication aspects involved in this. We are not pretending to provide ready-to-use solutions, but we nevertheless hope to give important insights from various perspectives for those concerned with tackling and mitigating crisis and emerging risks.

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